EXHIBIT 12

U.S. Patent No 10,154,055 v. Zoho

Overview

Plaintiff accuses Defendant of infringement through making, using, selling, offering for sale, and importation of Zoho's ("Defendant" or "Zoho") ManageEngine, including Endpoint Central and Vulnerability Manager Plus (the "Accused System and Method"), and all substantially similar products. The term "Accused System and Method" includes the associated computer hardware, interfaces, software, and data, and the processes and methods related thereto.

The Accused System and Method is accused of directly infringing U.S. Patent No. 10,154,055 (the"'055 Patent"). Plaintiff further accuses Defendant of indirectly infringing the '055 Patent by providing its customers and others the Accused System and Method to utilize in an infringing manner. Defendant intends to cause infringement by its customers and users as Defendant instructs users to use the Accused System and Method in an infringing manner. Defendant deploys client software to implement the Accused System and Method. Defendant also provides support and implementation services for the Accused System and Method, including providing instructions, guides, online materials, and technical support.

The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of Defendant's documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.

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10,154,055 Claim 7	Evidence
An apparatus, comprising: at least one platform; an intrusion prevention system component that is communicatively coupled with the at least one platform;	ManageEngine includes *at least one platform* (e.g., ManageEngine serving as a platform)*; an intrusion prevention system* (e.g., The vulnerability information collected across multiple endpoints which also includes antivirus option) *component that is communicatively coupled with the at least one platform* (e.g., Manage Engine serving as a platform for the vulnerability manager plus and firewall)*;* Note: See, for example, the evidence above (where applicable) and below (emphasis added, if any):

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Enterprise vulnerability management software

Vulnerability Manager Plus is a multi-OS vulnerability management and compliance solution that offers built-in remediation. It is an end-to-end vulnerability management tool delivering comprehensive coverage, continual visibility, rigorous assessment, and integral remediation of threats and vulnerabilities, from a single console. Whether your endpoints are on your local network, in a DMZ (demilitarized zone) network, at a remote location, or on the move, Vulnerability Manager Plus is the go-to solution to empower your distributed workforce with safe working conditions. Learn how to perform step-by-step vulnerability management in your enterprise with Vulnerability Manager Plus.

Scan

Scan and discover exposed areas of all your local and remote office endpoints as well as roaming devices.

Assess

Leverage attacker-based analytics, and prioritize areas that are more likely to be exploited by an attacker.

Manage

Mitigate the exploitation of security loopholes that exist in your network and prevent further loopholes from developing.

https://www.manageengine.com/vulnerability-management/?pos=EndpointCentral&loc=ProdMenu&cat=UEMS

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	Comprehensive vulnerability scanning Eliminating blind spots is the basis of successful vulnerability management. To achieve this, Vulnerability Manager Plus: • Detects known or emerging vulnerabilities across all your network endpoints, including workstations, laptops, servers, web servers, databases, virtual machines, and content management systems. • Offers continuous visibility into your endpoints, whether they are located at the local office, in a demilitarized zone, at a remote location, or always on the move. • Extends your visibility beyond just vulnerabilities and identifies misconfigurations, high-risk software, active ports, and much more. https://www.manageengine.com/vulnerability-management/vulnerability-scanner.html

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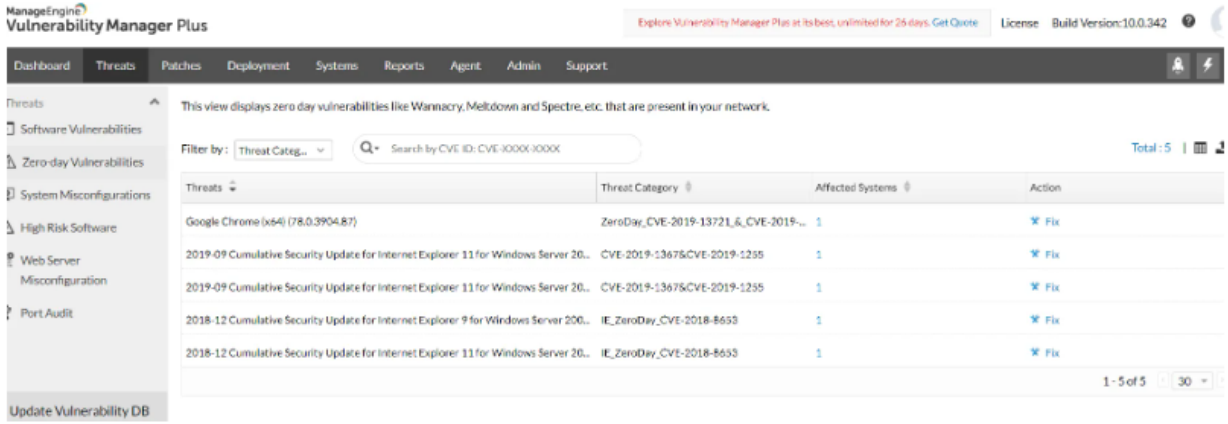
Leverage a dedicated view for zero-days

ManageEngine's security researchers constantly probe the internet for any details regarding new threats. As soon as details regarding zero-day vulnerabilities and publicly disclosed vulnerabilities come to light, the information is verified and updated to the central vulnerability database at once, and the data is synchronized to the Vulnerability Manager Plus server.



Vulnerability Manager Plus then scans your network for zero-day vulnerabilities and displays them in a dedicated view in the console, preventing them from being jumbled with less critical vulnerabilities. One of the components in the vulnerability dashboard keeps you constantly informed of how many zero-day vulnerabilities remain unresolved in your network.

Furthermore, you can learn in detail about the latest zero-day vulnerability from tech articles available in the security newsfeed. *Subscribe to the Vulnerability Manager Plus pitstop to receive email notifications on the latest zero day attacks and related news*

https://www.manageengine.com/vulnerability-management/zero-day-vulnerability-mitigation.html

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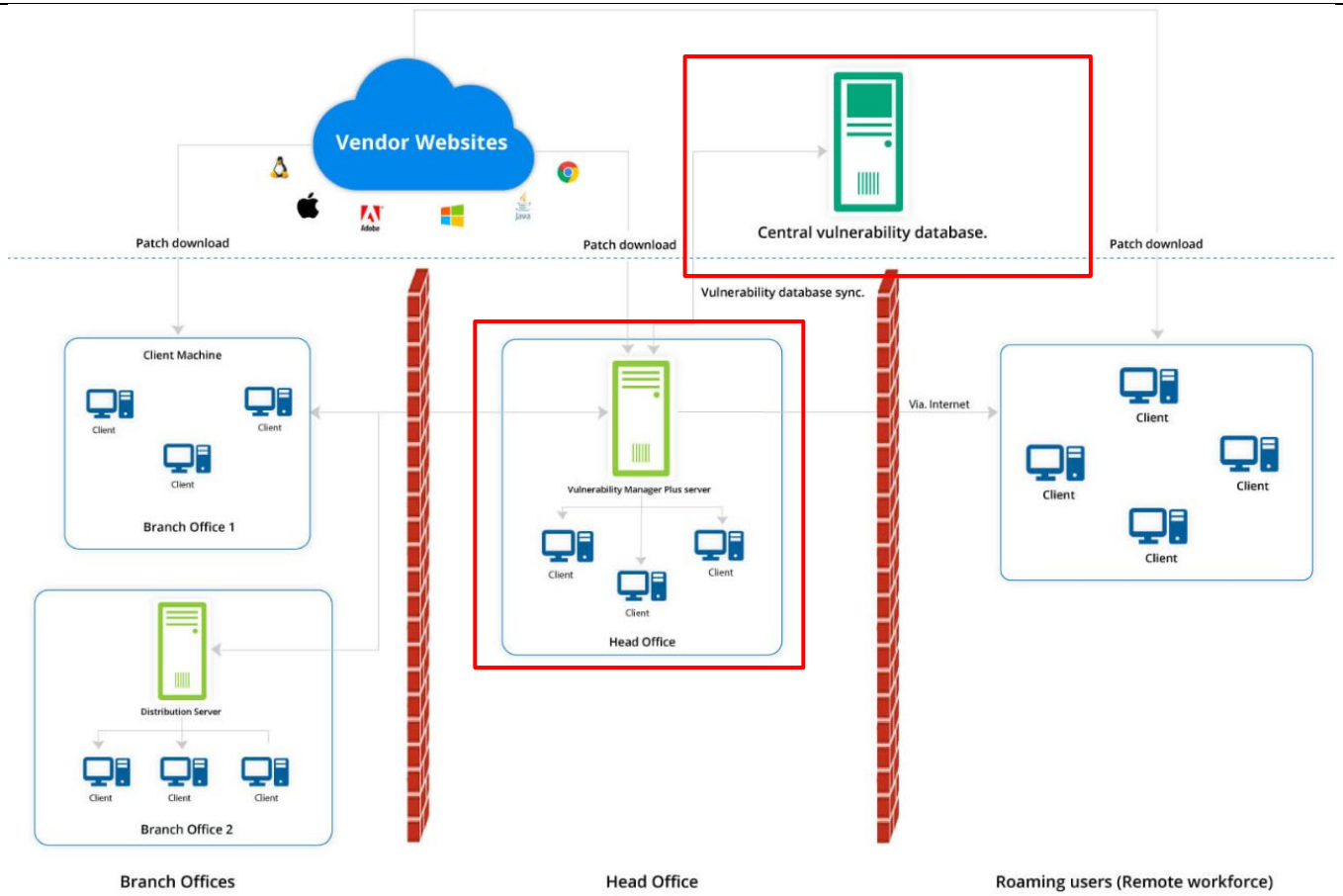

https://www.manageengine.com/vulnerability-management/images/vulnerability-management-process.jpg

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	Intrusion detection and prevention Our intrusion detection mechanism takes note of host-based signals on individual devices and network-based signals from monitoring points within our servers. Administrative access, use of privileged commands, and system calls on all servers in our production network are logged. Rules and machine intelligence built on top of this data give security engineers warnings of possible incidents. At the application layer, we have our proprietary WAF which operates on both whitelist and blacklist rules. At the Internet Service Providers (ISP) level, a multi-layered security approach is implemented with scrubbing, network routing, rate limiting, and filtering to handle attacks from network layer to application layer. This system provides clean traffic, reliable proxy service, and a prompt reporting of attacks, if any. https://www.manageengine.com/security.html?mesearch

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High Priority Vulnerabilities: Where your primary focus should be!

Vulnerabilities | Vulnerable Software

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Vulnerability Manager Plus automatically curates a list of vulnerabilities that are on the verge of exploitation. This list takes various risk factors into account, such as how easily exploitable a vulnerability is, its severity, age, and patch availability. This table helps you ensure that you haven't left out any essentials in your vulnerability assessment process.

https://www.manageengine.com/vulnerability-management/vulnerability-assessment.html

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a firewall that is communicatively coupled with the at least one platform; at least one first data storage that is communicatively coupled with the at least one platform; and at least one second data storage that is communicatively coupled with the at least one platform;	ManageEngine includes *a firewall that is communicatively coupled with the at least one platform* (e.g., The Firewall included in the ManageEngine platform)*; at least one first data storage that is communicatively coupled with the at least one platform* (e.g., Vulnerability manager plus architecture comprises a central database for storing global vulnerabilities known as the Central Vulnerability Database)*; and at least one second data storage that is communicatively coupled with the at least one platform* (e.g., the network devices or endpoints connected in the architecture of the vulnerability manager plus also acts as a storage device for local vulnerabilities and patches downloaded on the devices)*;* Note: See, for example, the evidence above (where applicable) and below (emphasis added, if any): Assessing software vulnerabilities: Vulnerability Manager Plus regularly scans your network for vulnerabilities. Once vulnerabilities are detected, then they are displayed in the web console. New vulnerabilities are being discovered constantly, therefore, it might get overwhelming for an user to decide on which vulnerability to remediate first. Therefore vulnerabilities should be assessed and prioritized based on the risk it presents to the enterprise. Vulnerability Manager Plus helps you assess the risk posed by vulnerabilities with the help of following parameters: https://www.manageengine.com/vulnerability-management/help/assess-and-remediate-vulnerabilities.html

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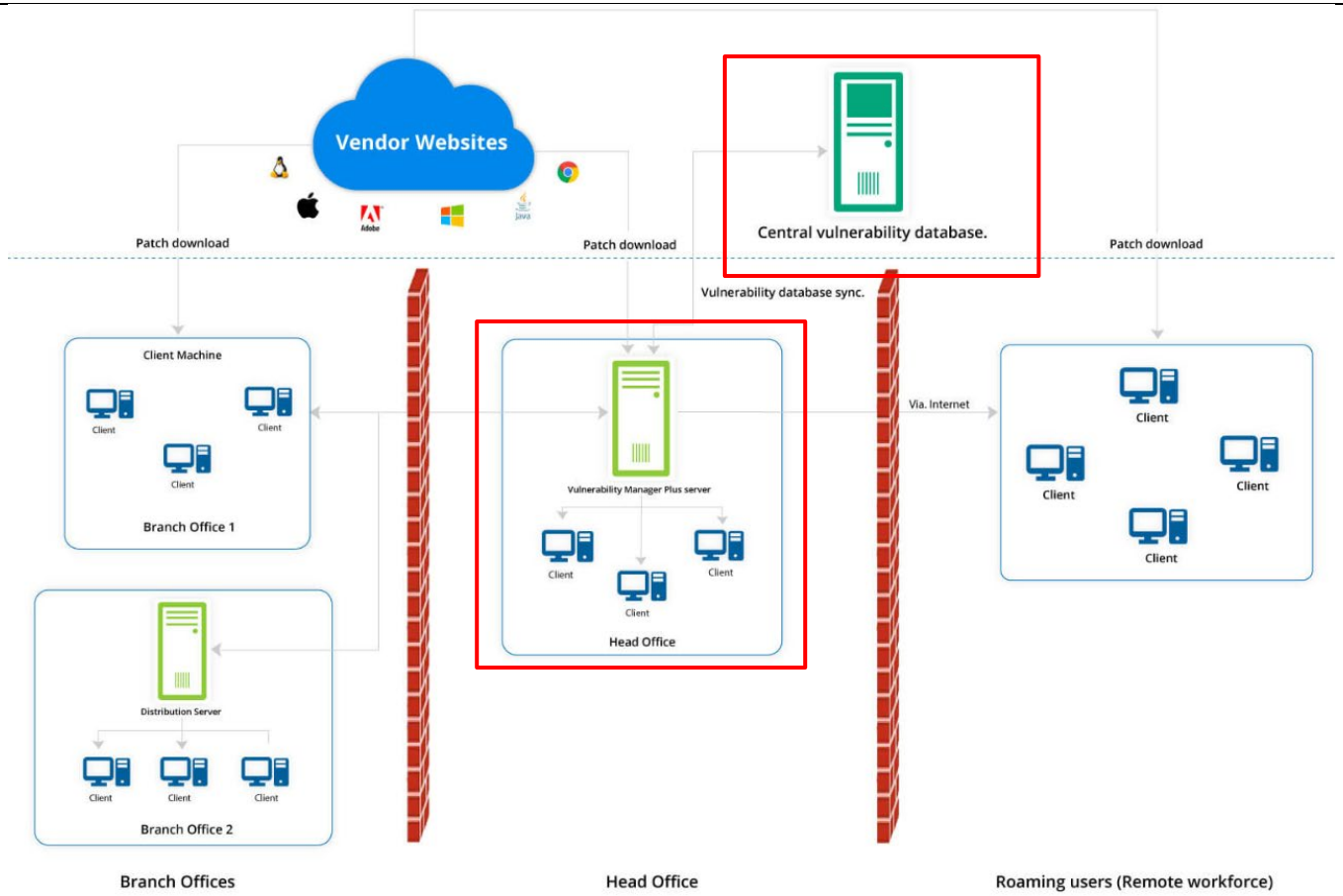

https://www.manageengine.com/vulnerability-management/images/vulnerability-management-process.jpg

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Firewall Policy Management

Firewall Analyzer is a firewall administration software, that helps in administering firewall rules and policies into multiple firewalls. The firewall rule automation ensures that firewall rules are pushed into the device seamlessly, avoiding errors and oversight. This firewall administration tool is capable of making the following changes.

- Add, modify, and delete network and service objects
- Add, modify, and delete firewall rules
- Analyze the implications of proposed firewall rule changes
- Push changes directly to the firewall

Refer the 'Firewall Rule Administration' page for more details.

Firewall Analyzer is an efficient firewall rule and policy management tool that helps you gain visibility on all firewall rules, optimize firewall rules, and remove rule anomalies. It provides rule management reports for most major firewall devices including Cisco, FortiGate, WatchGuard, and Check Point.

https://www.manageengine.com/products/firewall/firewall-rule-management.html

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<table>
<tr>
<td></td>
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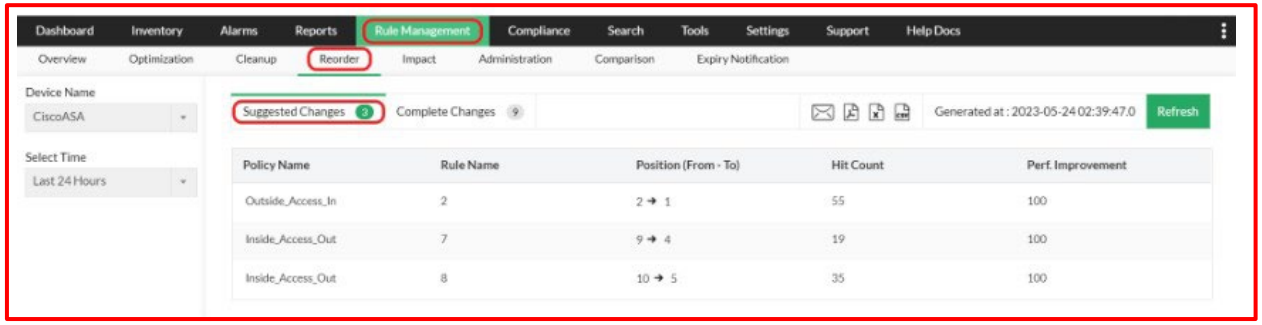

Firewall Analyzer analyzes various rule interactions and anomalies to provide suggestions on rule position. By correlating the number of rule hits with rule complexity and anomalies, it can estimate the performance improvement for a suggested change. With the help of this report, you get an understanding of how to organize firewall rules to maximize speed.
https://www.manageengine.com/products/firewall/firewall-rule-management.html
</td>
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</table>

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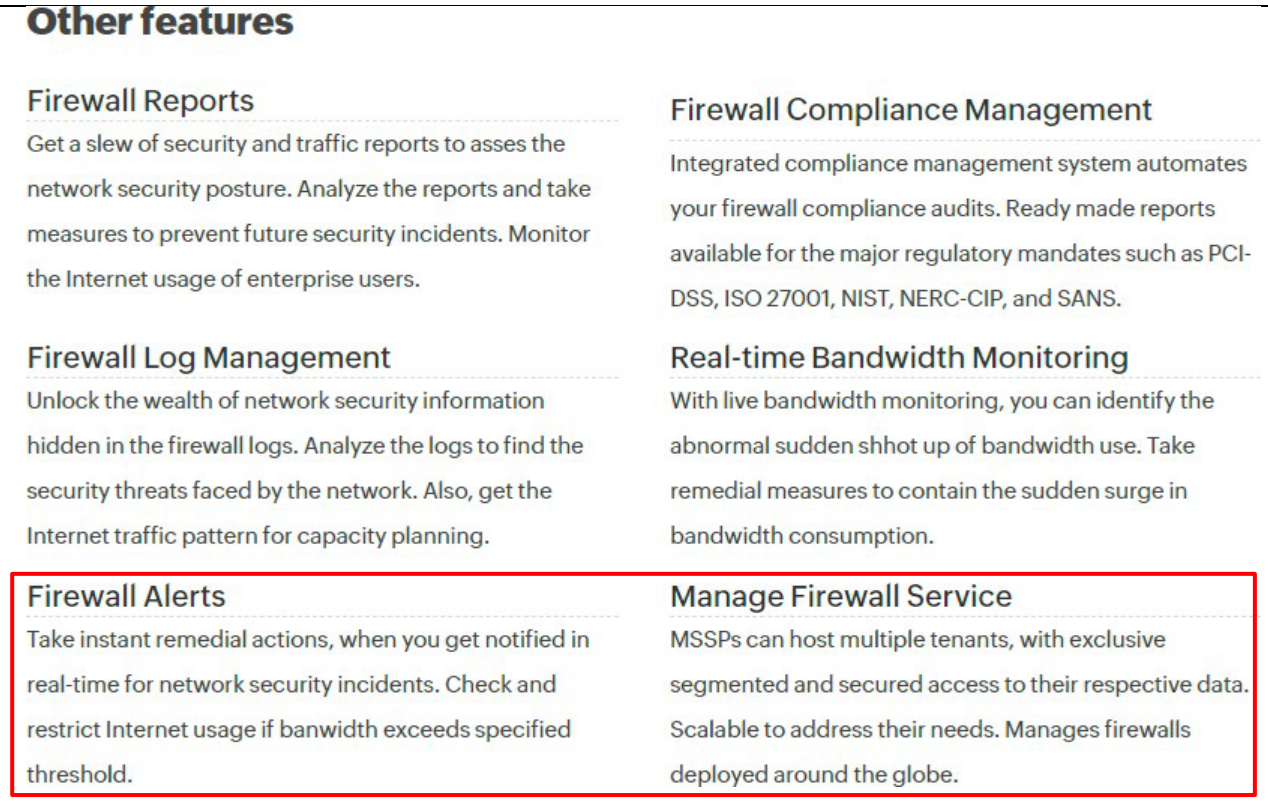

Other features

Firewall Reports

Get a slew of security and traffic reports to asses the network security posture. Analyze the reports and take measures to prevent future security incidents. Monitor the Internet usage of enterprise users.

Firewall Compliance Management

Integrated compliance management system automates your firewall compliance audits. Ready made reports available for the major regulatory mandates such as PCI-DSS, ISO 27001, NIST, NERC-CIP, and SANS.

Firewall Log Management

Unlock the wealth of network security information hidden in the firewall logs. Analyze the logs to find the security threats faced by the network. Also, get the Internet traffic pattern for capacity planning.

Real-time Bandwidth Monitoring

With live bandwidth monitoring, you can identify the abnormal sudden shhot up of bandwidth use. Take remedial measures to contain the sudden surge in bandwidth consumption.

Firewall Alerts

Take instant remedial actions, when you get notified in real-time for network security incidents. Check and restrict Internet usage if banwidth exceeds specified threshold.

Manage Firewall Service

MSSPs can host multiple tenants, with exclusive segmented and secured access to their respective data. Scalable to address their needs. Manages firewalls deployed around the globe.

https://www.manageengine.com/products/firewall/firewall-rule-management.html

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https://www.manageengine.com/vulnerability-management/vulnerability-assessment.html

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said at least one platform: receives a result of at least one operation performed on at least one of a plurality of networked devices, the at least one operation based on first information from the at least one first data storage identifying a plurality of potential vulnerabilities including at least one first potential vulnerability and at least one second potential vulnerability, the at least one operation configured for:	ManageEngine discloses that *the platform receives a result of at least one operation performed on at least one of a plurality of networked devices* (e.g., The vulnerability information collected by scanning operation), *the at least one operation based on first information from at least one first data storage identifying a plurality of potential vulnerabilities* (e.g., Known vulnerabilities) *including at least one first potential vulnerability and at least one second potential vulnerability* (e.g., Multiple vulnerability information collected from open source and stored in central database after verification and then system scan across multiple endpoints), *the at least one operation configured for:* Note: See, for example, the evidence above (where applicable) and below (emphasis added, if any): 2) What is Vulnerability Scanning? Vulnerability scanning is a security process that checks your computer systems to find any weaknesses or vulnerabilities that could be used by hackers to gain unauthorized access. It's like a thorough check-up for your network and software, where any potential security risks are identified and reported back to you so that you can take action to fix them. This helps to protect your organization's digital assets and ensures that sensitive information remains secure. https://www.manageengine.com/vulnerability-management/vulnerability-scanner.html

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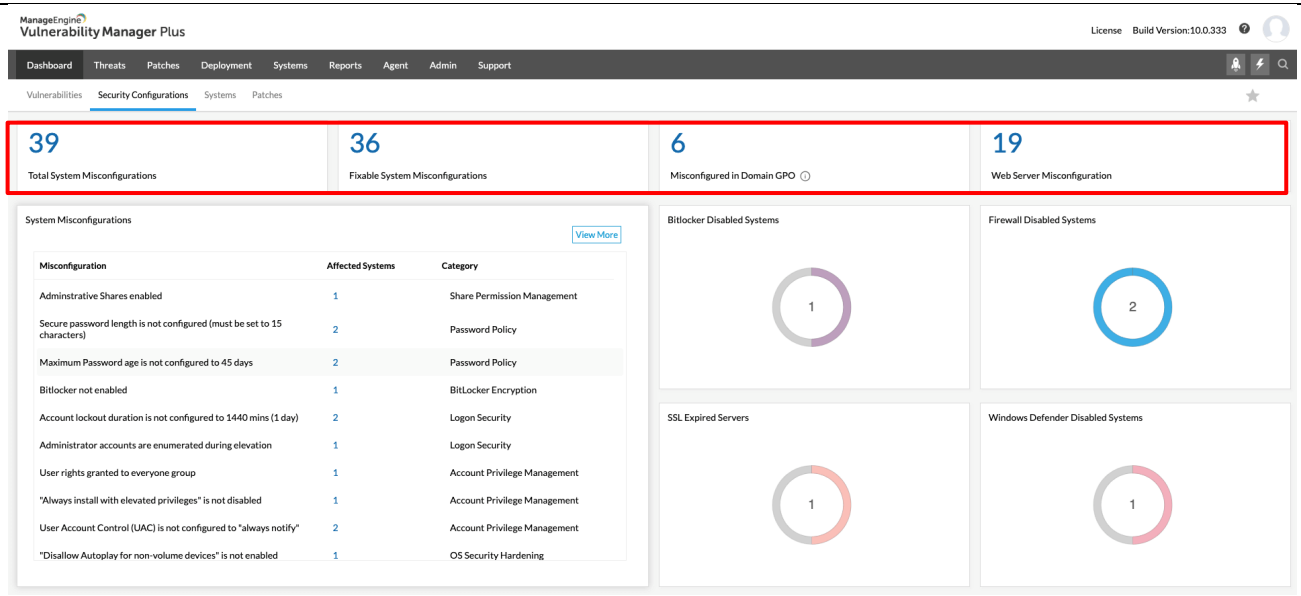

https://www.manageengine.com/vulnerability-management/what-is-vulnerability-management.html

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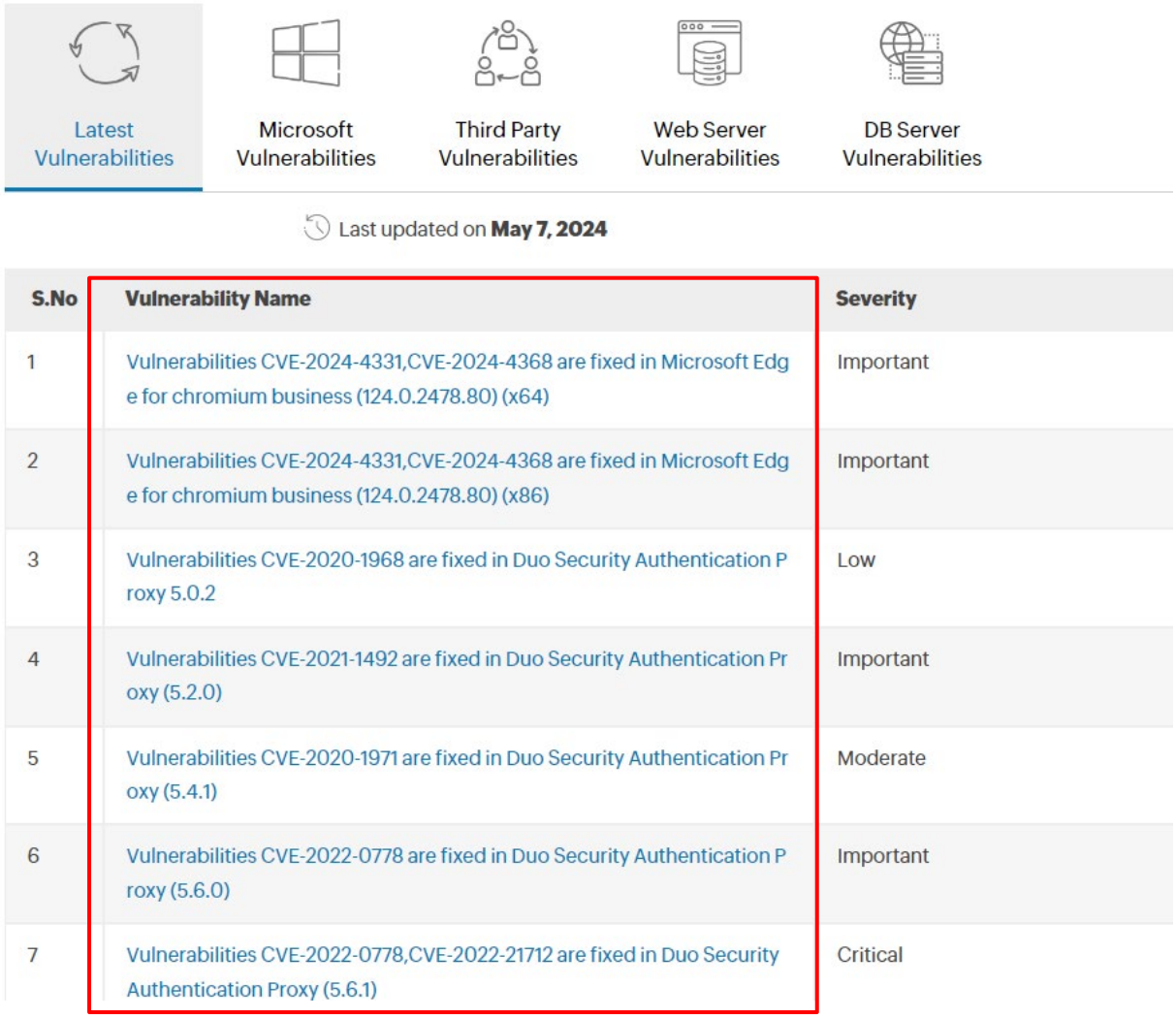

S.No	Vulnerability Name	Severity
1	Vulnerabilities CVE-2024-4331,CVE-2024-4368 are fixed in Microsoft Edge for chromium business (124.0.2478.80) (x64)	Important
2	Vulnerabilities CVE-2024-4331,CVE-2024-4368 are fixed in Microsoft Edge for chromium business (124.0.2478.80) (x86)	Important
3	Vulnerabilities CVE-2020-1968 are fixed in Duo Security Authentication Proxy 5.0.2	Low
4	Vulnerabilities CVE-2021-1492 are fixed in Duo Security Authentication Proxy (5.2.0)	Important
5	Vulnerabilities CVE-2020-1971 are fixed in Duo Security Authentication Proxy (5.4.1)	Moderate
6	Vulnerabilities CVE-2022-0778 are fixed in Duo Security Authentication Proxy (5.6.0)	Important
7	Vulnerabilities CVE-2022-0778,CVE-2022-21712 are fixed in Duo Security Authentication Proxy (5.6.1)	Critical

https://www.manageengine.com/vulnerability-management/vulnerability-database/

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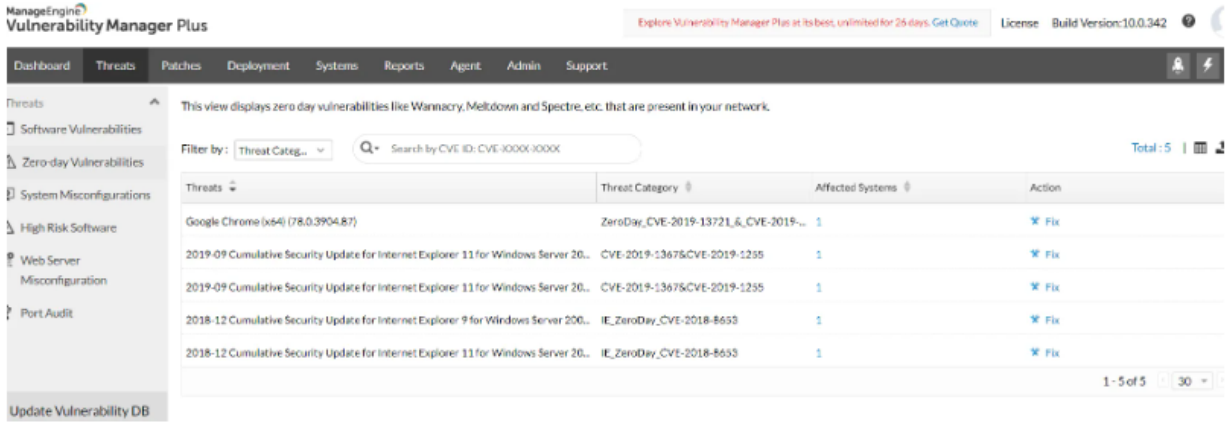
Leverage a dedicated view for zero-days

ManageEngine's security researchers constantly probe the internet for any details regarding new threats. As soon as details regarding zero-day vulnerabilities and publicly disclosed vulnerabilities come to light, the information is verified and updated to the central vulnerability database at once, and the data is synchronized to the Vulnerability Manager Plus server.



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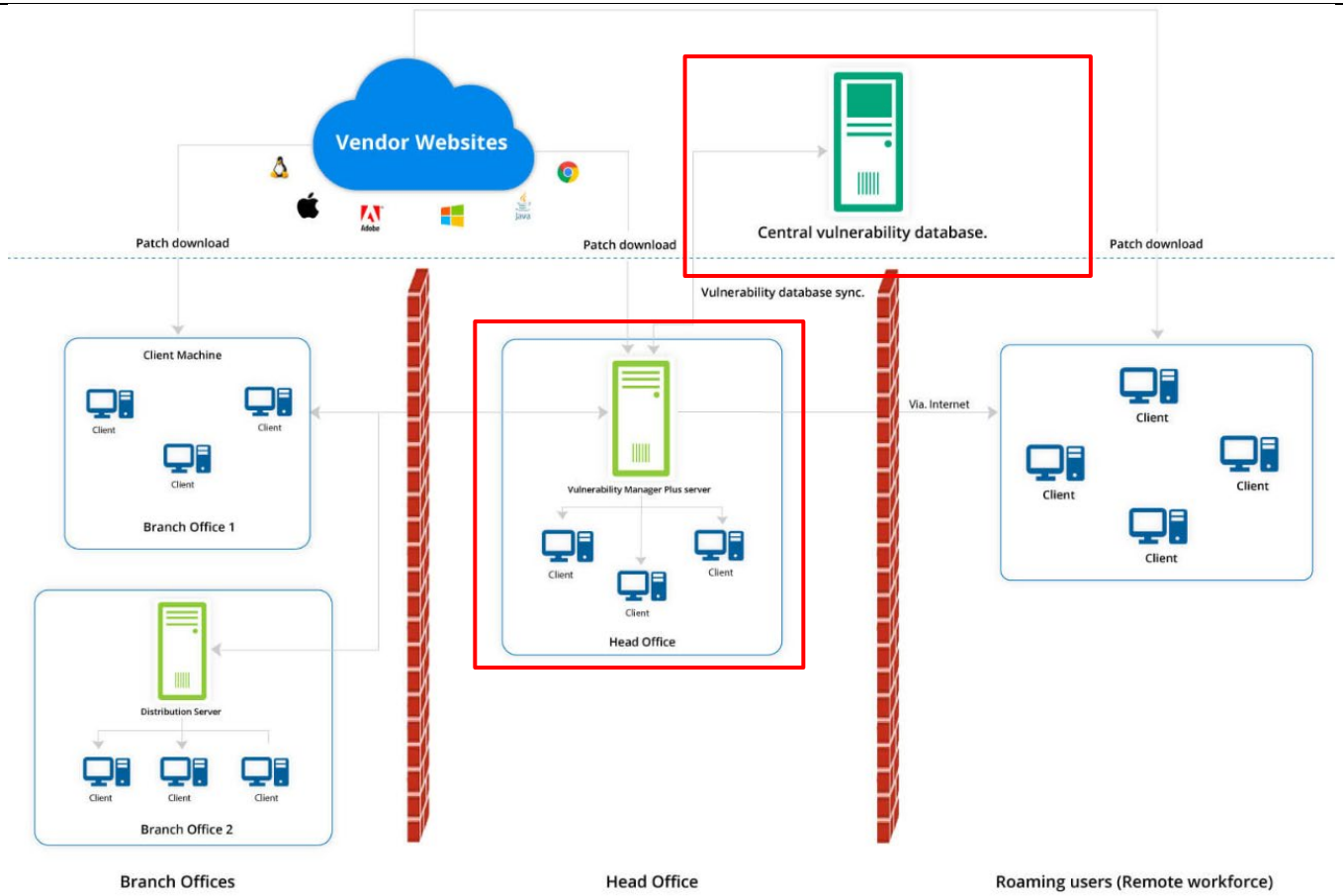

https://www.manageengine.com/vulnerability-management/images/vulnerability-management-process.jpg

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Vulnerability Manager Plus Server:

The Vulnerability Manager Plus Server helps you to centrally perform all the vulnerability management and compliance tasks in your network endpoints. Some of the tasks include the following:

- Installing agents in computers
- Scanning computers for vulnerabilities and misconfigurations
- Deploying patches and secure configurations
- Uninstalling high-risk software
- Auditing active ports
- Auditing for compliance against CIS benchmarks

Any of the Windows computers in your network with the requirements mentioned here can be hosted as your Vulnerability Manager Plus Server. This Vulnerability Manager Plus Server at the customer site subscribes to the Central Vulnerability Database, from which it synchronizes the latest information on threats, patches, vulnerabilities, and compliance policies. Patches are downloaded directly from vendor sites and stored centrally in the server's patch store and will be replicated to your network endpoints to conserve bandwidth.

https://www.manageengine.com/vulnerability-management/help/vulnerability-management-architecture.html#v1

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identifying at least one configuration associated with the at least one networked device, and	ManageEngine *identifying at least one configuration associated with the at least one networked device* (e.g., The vulnerability information collected by scanning operation and identify a misconfiguration). Note: See, for example, the evidence above (where applicable) and below (emphasis added, if any):

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How to prevent security misconfigurations?

If vulnerabilities are the gateway to the network, it's the misconfigurations that attackers leverage to worm their way to the intended targets. Security misconfigurations are not hard to fix, but they are unavoidable in an enterprise operating at scale. Finding them is a needle in the haystack, as they can be located across any component in an organization's systems, such as its servers, operating systems, applications, and browsers. Lack of visibility and centralized means to remediate misconfigurations makes organizations fall victim to misconfiguration attacks.

https://www.manageengine.com/vulnerability-management/misconfiguration/?mesearch

As soon as it's up and running in your network, Vulnerability Manager Plus automatically discovers your Active Directory and workgroup assets. Scaling up? No problem. Since Vulnerability Manager Plus is constantly in sync with Active Directory, new assets will be brought under management as soon as they enter your network, leaving no opportunity for new threats to go unnoticed.

Leveraging endpoint agent technology, Vulnerability Manager Plus scans your laptops, desktops, servers, databases, workstations, and virtual machines across your entire global hybrid IT environment every 90 minutes, irrespective of whether they're within the corporate boundary or not.

You can set up distribution servers, which replicate primary server commands, for your remote offices simplify management and conserve bandwidth. You can even manage assets within a closed network like a DMZ.

Identified systems are probed for different attributes: operating systems, open ports, installed software, user accounts, file system structure, system configurations, and more. Using the library of up-to-date scan data, Vulnerability Manager Plus checks the discovered assets for threats and vulnerabilities and delivers appropriate remediation.

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	https://www.manageengine.com/vulnerability-management/what-is-vulnerability-management.html
determining that the at least one networked device is actually vulnerable to at least one actual vulnerability, based on the identified at least one configuration and the first information from the at least one first data storage identifying the plurality of potential vulnerabilities, such that second information associated with the result is stored in the at least one second data storage separate from the at least one first data storage, the second information relating to the at least one actual vulnerability to which the at least one	ManageEngine includes *determining that the at least one networked device is actually vulnerable to at least one actual vulnerability* (e.g., The vulnerability information collected by scanning operation and identify a misconfiguration)*, based on the identified at least one configuration and the first information from the at least one first data storage identifying the plurality of potential vulnerabilities* (e.g., Multiple vulnerability information collected from open source and stored in central database after verification). *such that second information associated with the result is stored in the at least one second data storage separate from the at least one first data storage, the second information relating to the at least one actual vulnerability to which the at least one networked device is actually vulnerable* (e.g., The vulnerability information collected across multiple endpoints is consolidated in a web console for centralized management and if vulnerabilities exist then displays them in a dedicated view in the console with its fix)*;* Note: See, for example, the evidence above (where applicable) and below (emphasis added, if any):

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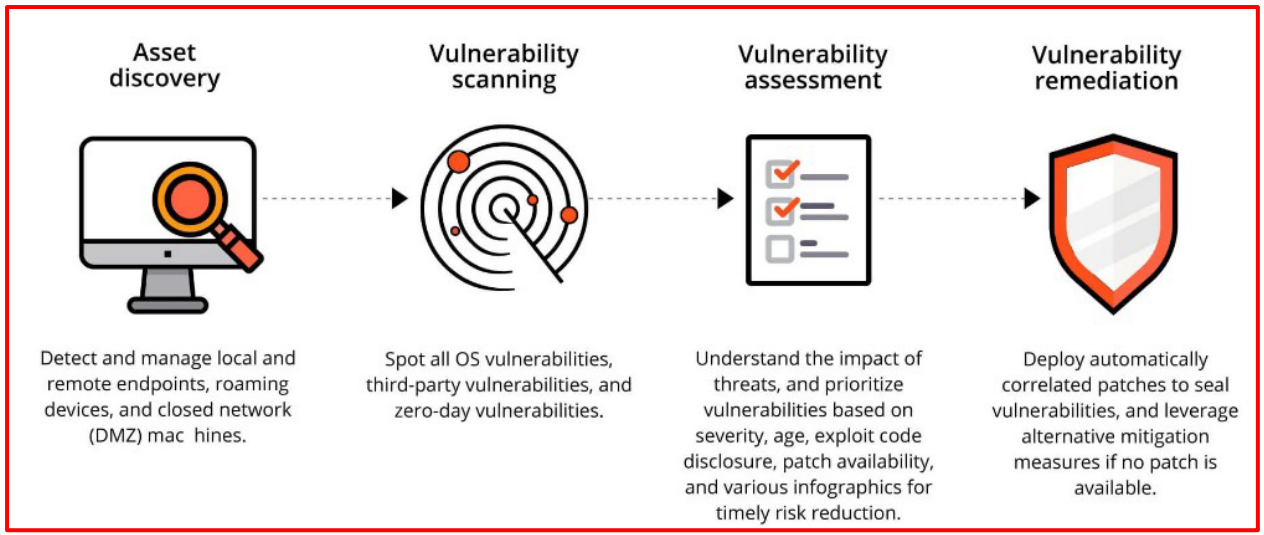
networked device is actually vulnerable;	 https://www.manageengine.com/vulnerability-management/vulnerability-assessment.html

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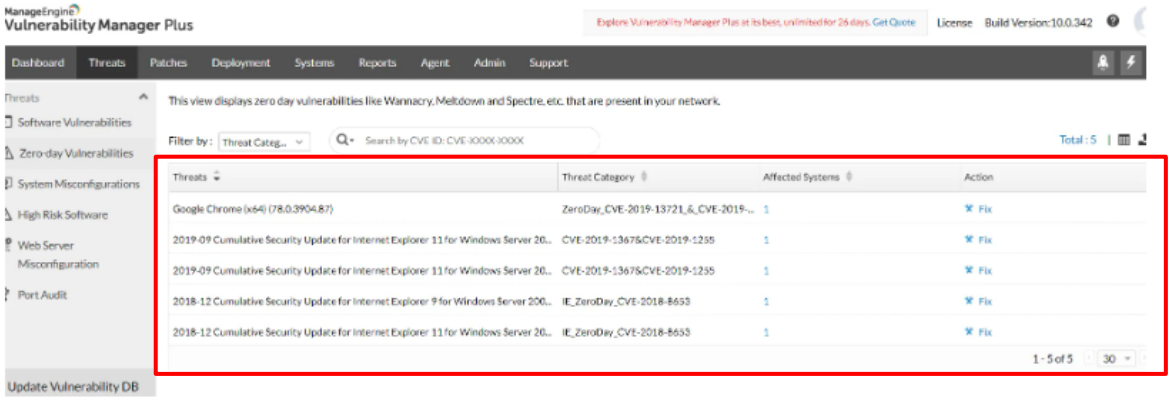
Leverage a dedicated view for zero-days

ManageEngine's security researchers constantly probe the internet for any details regarding new threats. As soon as details regarding zero-day vulnerabilities and publicly disclosed vulnerabilities come to light, the information is verified and updated to the central vulnerability database at once, and the data is synchronized to the Vulnerability Manager Plus server.



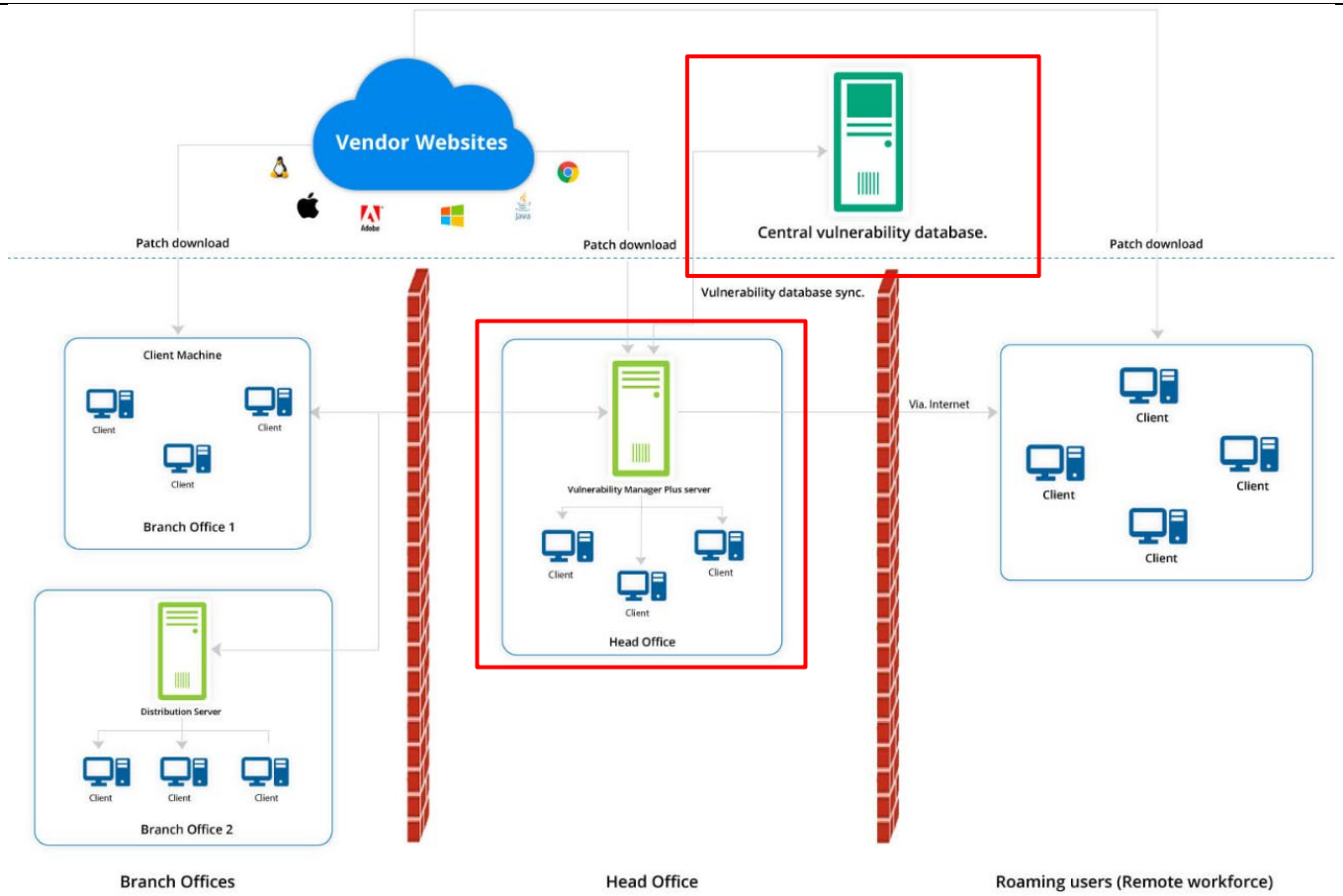
Vulnerability Manager Plus then scans your network for zero-day vulnerabilities and displays them in a dedicated view in the console, preventing them from being jumbled with less critical vulnerabilities. One of the components in the vulnerability dashboard keeps you constantly informed of how many zero-day vulnerabilities remain unresolved in your network.

Furthermore, you can learn in detail about the latest zero-day vulnerability from tech articles available in the security newsfeed. *Subscribe to the Vulnerability Manager Plus pitstop to receive email notifications on the latest zero day attacks and related news*

https://www.manageengine.com/vulnerability-management/zero-day-vulnerability-mitigation.html

EXHIBIT 12

U.S. Patent No 10,154,055 v. Zoho



https://www.manageengine.com/vulnerability-management/images/vulnerability-management-process.jpg

EXHIBIT 12

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See what matters most at a glimpse with dashboard widgets

The vulnerability information collected across multiple endpoints is consolidated in a web console for centralized management and represented with meaningful context in dashboard widgets, translating to reliable and timely results. These interactive dashboard widgets are tailored to direct your attention to the most alarming areas in your network.

Vulnerability Severity Summary | Zero-day vulnerabilities | Vulnerability Age Matrix | Vulnerabilities Over Time | **High Priority Vulnerabilities**

High Priority Vulnerabilities: Where your primary focus should be!

Vulnerabilities | Vulnerable Software — View More

Vulnerabilities	Affected Systems	Exploit Status	Software Name
Security Update for Windows 8.1 for x64-based Systems (KB3010788)	1	Available	Windows 8.1 Enterprise Edition (x64)
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Vulnerability Manager Plus automatically curates a list of vulnerabilities that are on the verge of exploitation. This list takes various risk factors into account, such as how easily exploitable a vulnerability is, its severity, age, and patch availability. This table helps you ensure that you haven't left out any essentials in your vulnerability assessment process.

https://www.manageengine.com/vulnerability-management/vulnerability-assessment.html

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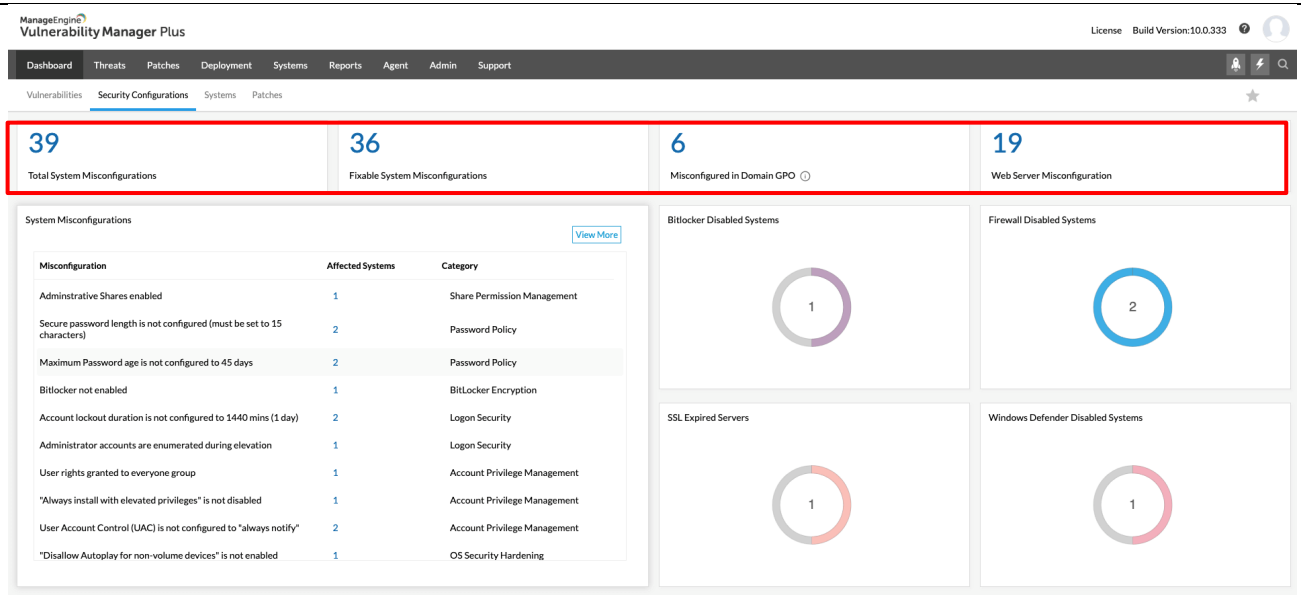

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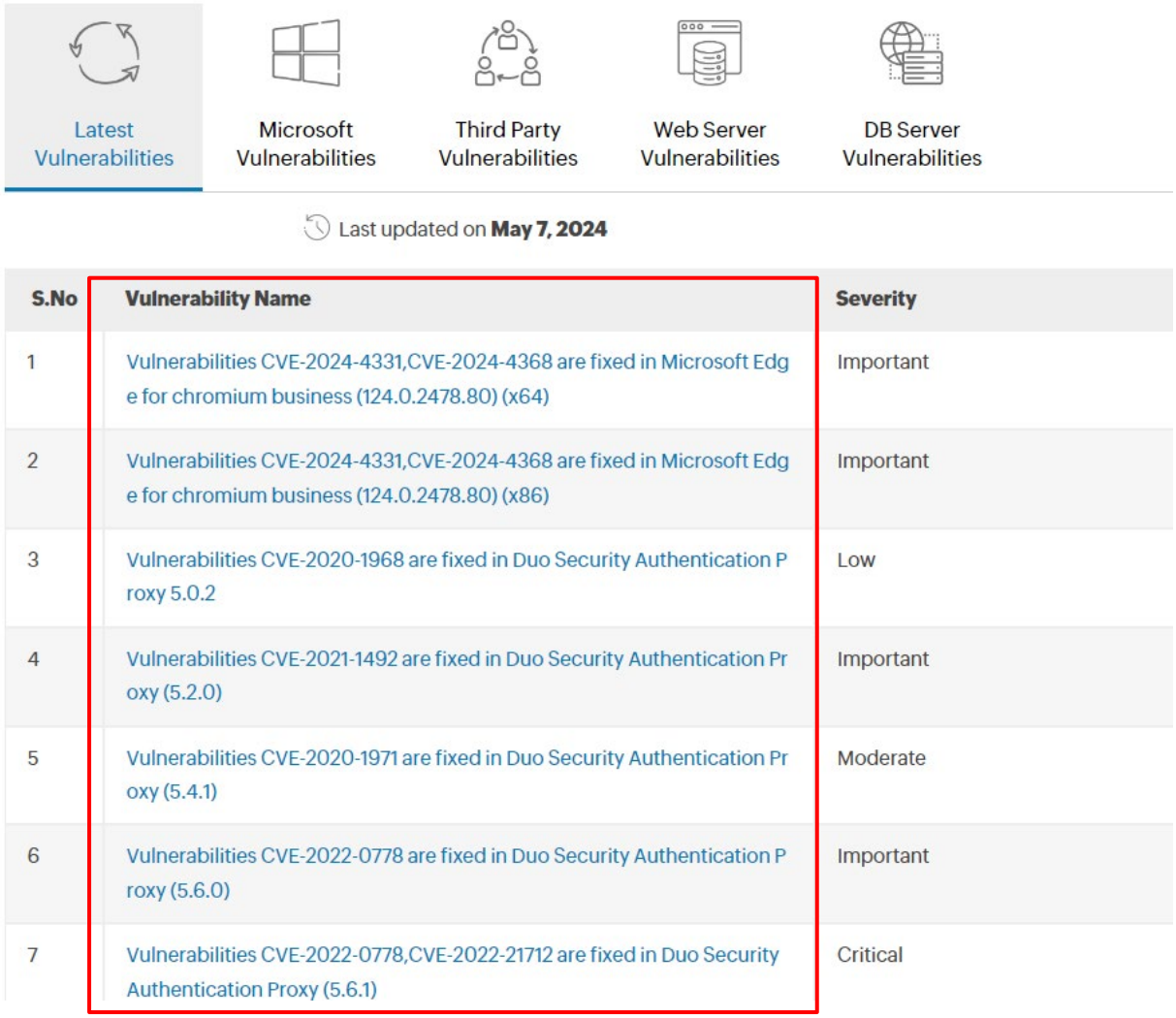

S.No	Vulnerability Name	Severity
1	Vulnerabilities CVE-2024-4331,CVE-2024-4368 are fixed in Microsoft Edge for chromium business (124.0.2478.80) (x64)	Important
2	Vulnerabilities CVE-2024-4331,CVE-2024-4368 are fixed in Microsoft Edge for chromium business (124.0.2478.80) (x86)	Important
3	Vulnerabilities CVE-2020-1968 are fixed in Duo Security Authentication Proxy 5.0.2	Low
4	Vulnerabilities CVE-2021-1492 are fixed in Duo Security Authentication Proxy (5.2.0)	Important
5	Vulnerabilities CVE-2020-1971 are fixed in Duo Security Authentication Proxy (5.4.1)	Moderate
6	Vulnerabilities CVE-2022-0778 are fixed in Duo Security Authentication Proxy (5.6.0)	Important
7	Vulnerabilities CVE-2022-0778,CVE-2022-21712 are fixed in Duo Security Authentication Proxy (5.6.1)	Critical

https://www.manageengine.com/vulnerability-management/vulnerability-database/

EXHIBIT 12

U.S. Patent No 10,154,055 v. Zoho

How to prevent security misconfigurations?

If vulnerabilities are the gateway to the network, it's the misconfigurations that attackers leverage to worm their way to the intended targets. Security misconfigurations are not hard to fix, but they are unavoidable in an enterprise operating at scale. Finding them is a needle in the haystack, as they can be located across any component in an organization's systems, such as its servers, operating systems, applications, and browsers. Lack of visibility and centralized means to remediate misconfigurations makes organizations fall victim to misconfiguration attacks.

https://www.manageengine.com/vulnerability-management/misconfiguration/?mesearch

How can I view the complete list of CVEs affecting my endpoints?

Vulnerability Manager Plus boasts a dedicated Detected CVEs view that lists all the CVEs affecting your network endpoints. All you have to do is select the desired CVEs then click Fix CVE to instantly create a patch deployment task in all the affected machines.

https://www.manageengine.com/vulnerability-management/vulnerability-assessment.html

EXHIBIT 12

U.S. Patent No 10,154,055 v. Zoho

	As soon as it's up and running in your network, Vulnerability Manager Plus automatically discovers your Active Directory and workgroup assets. Scaling up? No problem. Since Vulnerability Manager Plus is constantly in sync with Active Directory, new assets will be brought under management as soon as they enter your network, leaving no opportunity for new threats to go unnoticed. Leveraging endpoint agent technology, Vulnerability Manager Plus scans your laptops, desktops, servers, databases, workstations, and virtual machines across your entire global hybrid IT environment every 90 minutes, irrespective of whether they're within the corporate boundary or not. You can set up distribution servers, which replicate primary server commands, for your remote offices simplify management and conserve bandwidth. You can even manage assets within a closed network like a DMZ. Identified systems are probed for different attributes: operating systems, open ports, installed software, user accounts, file system structure, system configurations, and more. Using the library of up-to-date scan data, Vulnerability Manager Plus checks the discovered assets for threats and vulnerabilities and delivers appropriate remediation. https://www.manageengine.com/vulnerability-management/what-is-vulnerability-management.html
causes to display, via at least one user interface, a plurality of techniques including a first technique for utilizing the intrusion prevention system component for occurrence mitigation, and a second	ManageEngine *causes to display, via at least one user interface* (e.g., ManageEngine Vulnerability Manager Plus includes web consol)*, a plurality of techniques including a first technique for utilizing an intrusion prevention system component for occurrence mitigation* (e.g., ManageEngine Vulnerability Manager Plus includes antivirus option)*, and a second technique for utilizing a firewall for occurrence mitigation* (e.g., ManageEngine Vulnerability Manager Plus includes firewall option. The ManageEngine provides flexibility to choose the devices for applying the different policies or mitigation techniques according to the requirements)*;*

EXHIBIT 12

U.S. Patent No 10,154,055 v. Zoho

technique for utilizing the firewall for occurrence mitigation;	Note: See, for example, the evidence above (where applicable) and below (emphasis added, if any): **Intrusion detection and prevention** Our intrusion detection mechanism takes note of host-based signals on individual devices and network-based signals from monitoring points within our servers. Administrative access, use of privileged commands, and system calls on all servers in our production network are logged. Rules and machine intelligence built on top of this data give security engineers warnings of possible incidents. At the application layer, we have our proprietary WAF which operates on both whitelist and blacklist rules. At the Internet Service Providers (ISP) level, a multi-layered security approach is implemented with scrubbing, network routing, rate limiting, and filtering to handle attacks from network layer to application layer. This system provides clean traffic, reliable proxy service, and a prompt reporting of attacks, if any. https://www.manageengine.com/security.html?mesearch

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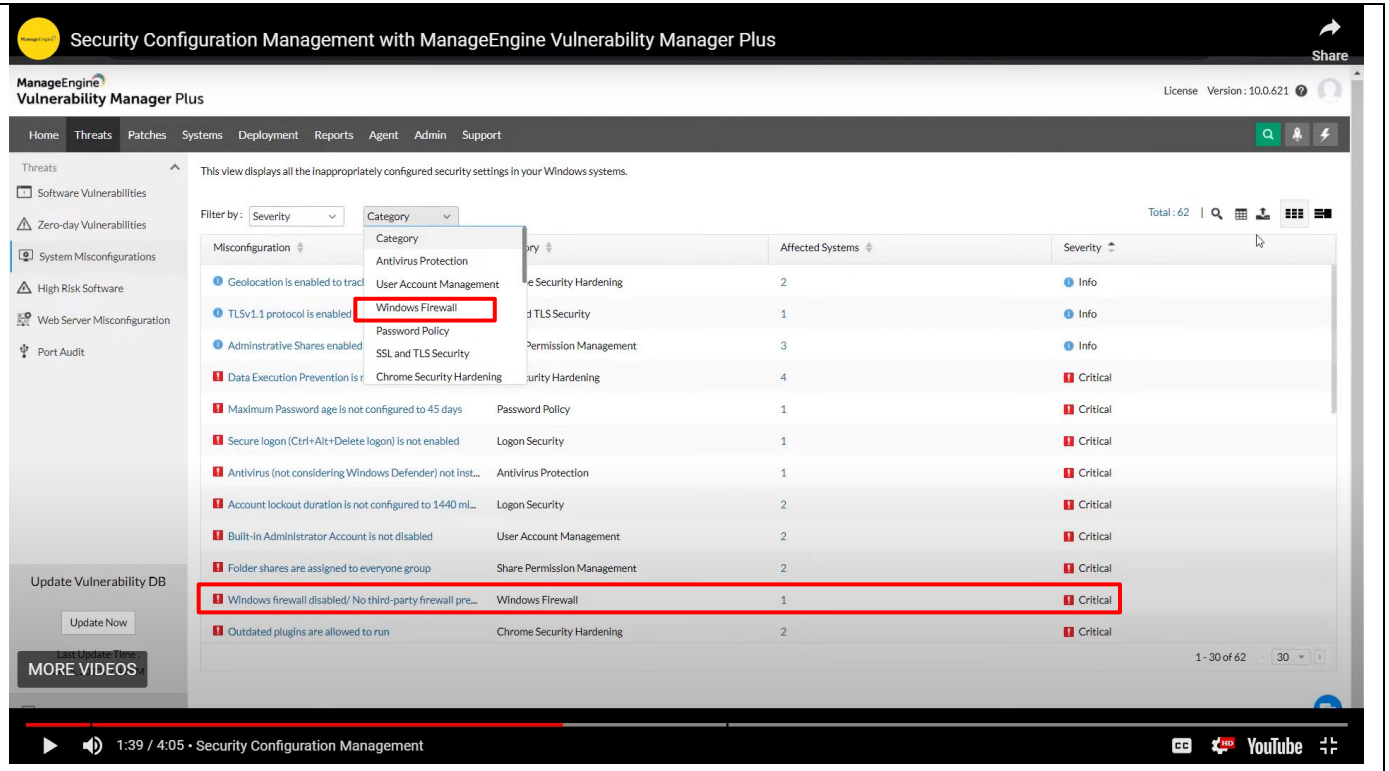

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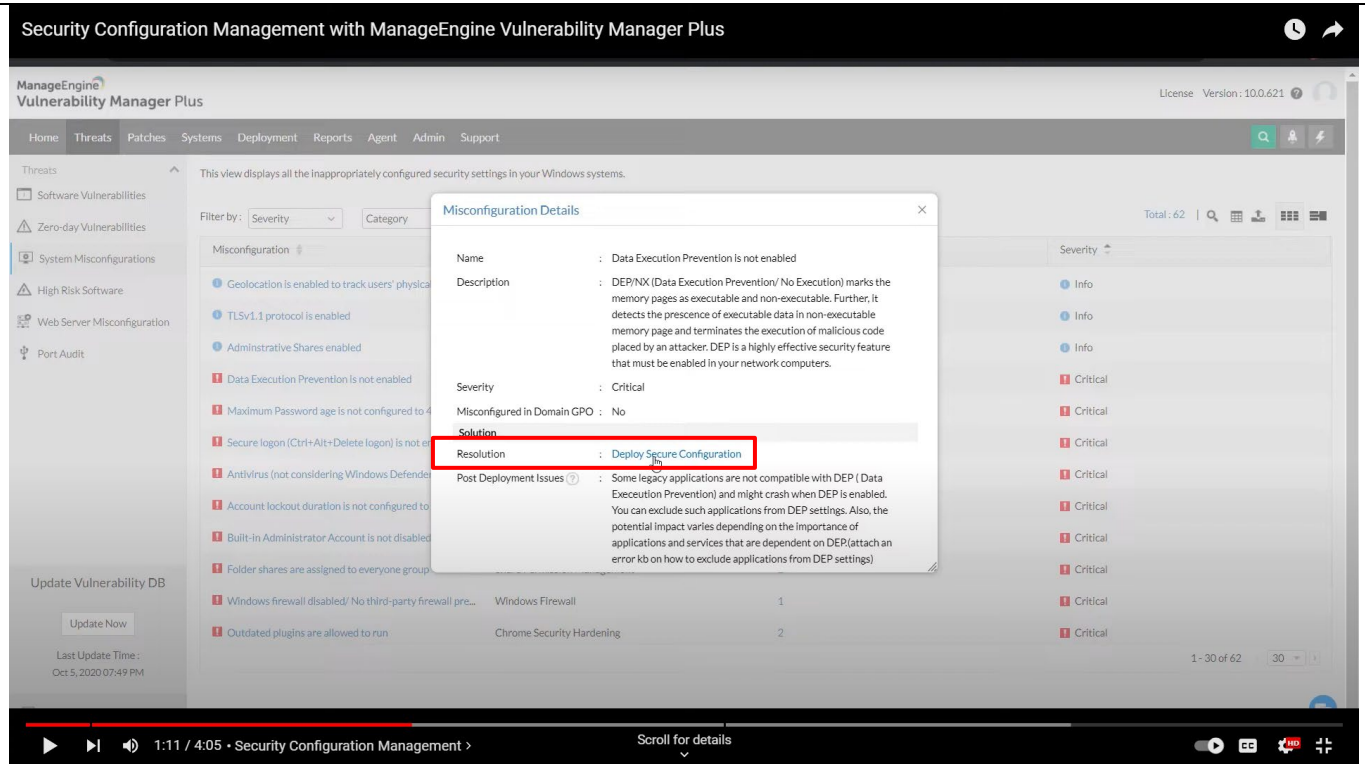

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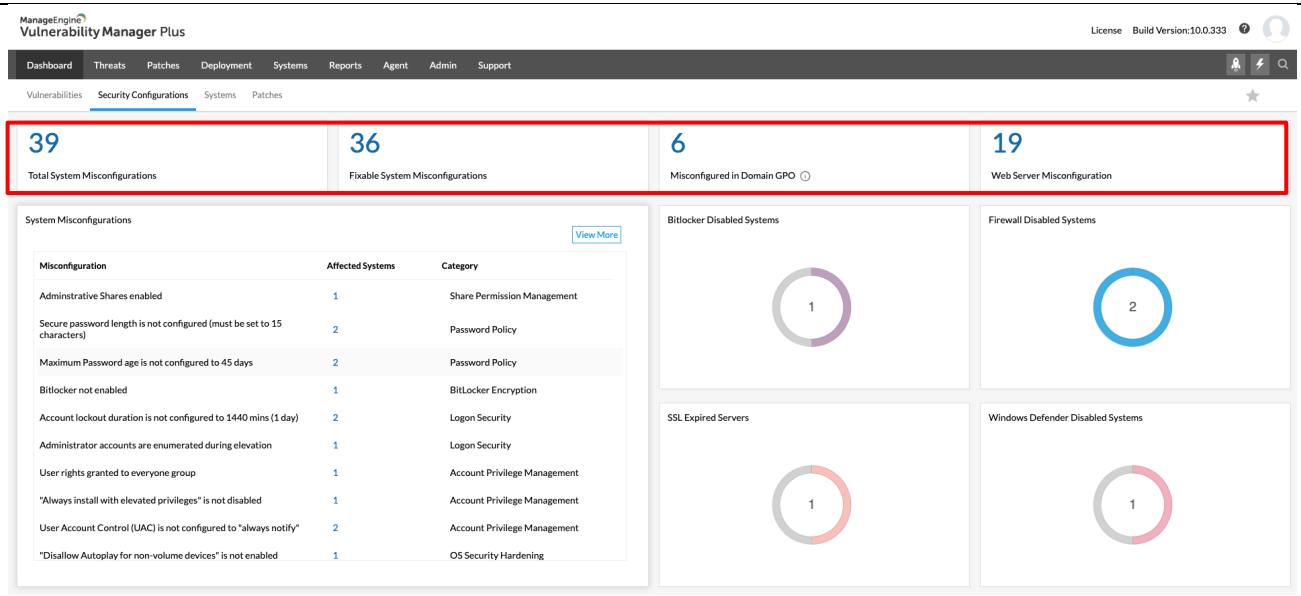

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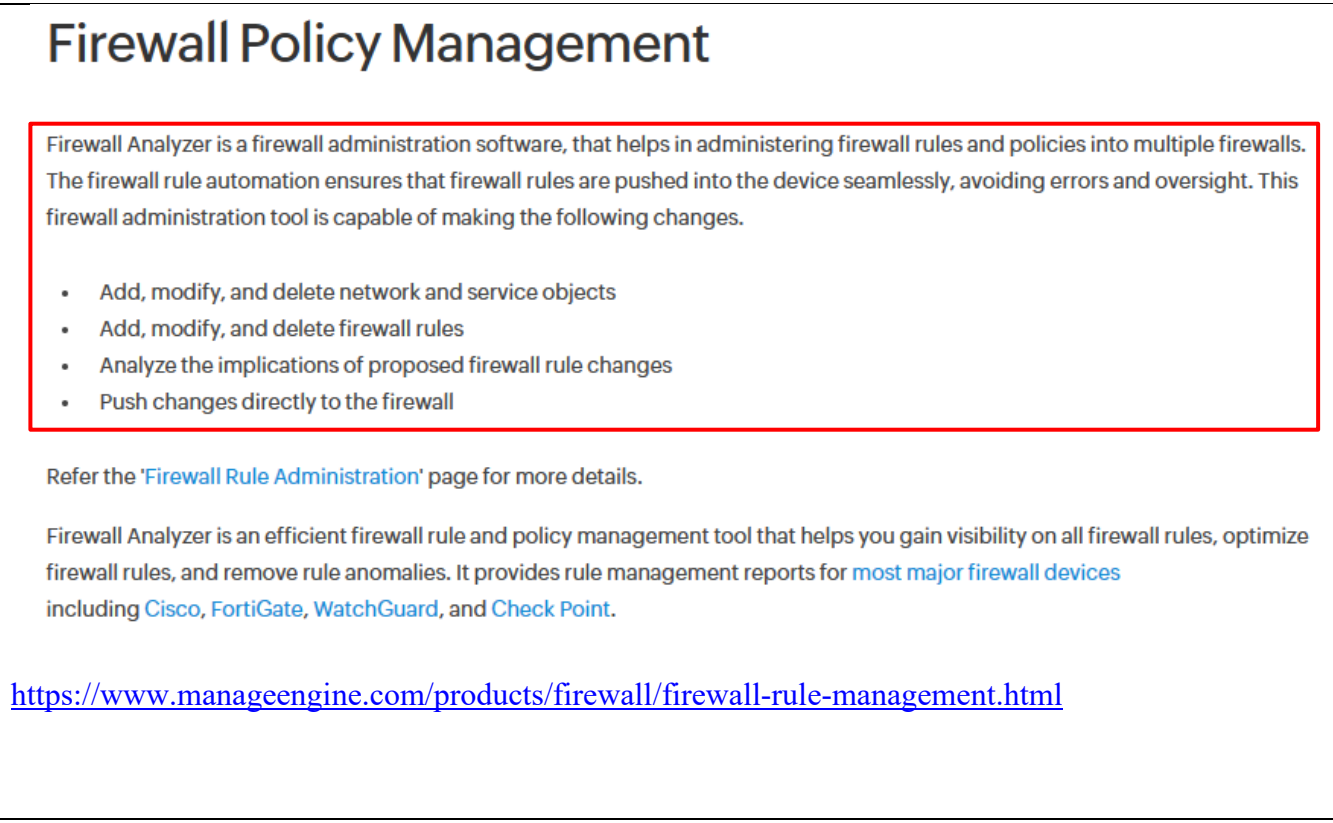

Firewall Policy Management

Firewall Analyzer is a firewall administration software, that helps in administering firewall rules and policies into multiple firewalls. The firewall rule automation ensures that firewall rules are pushed into the device seamlessly, avoiding errors and oversight. This firewall administration tool is capable of making the following changes.

- Add, modify, and delete network and service objects
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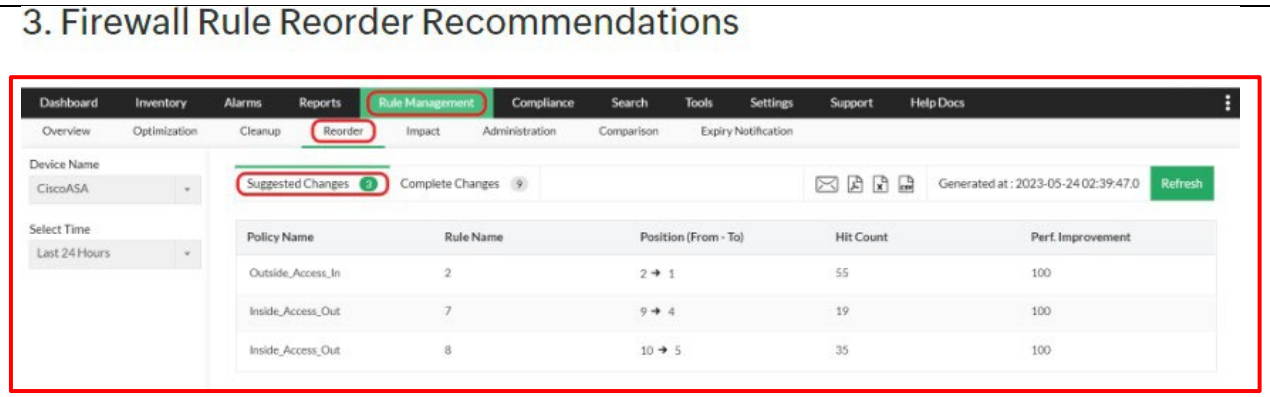

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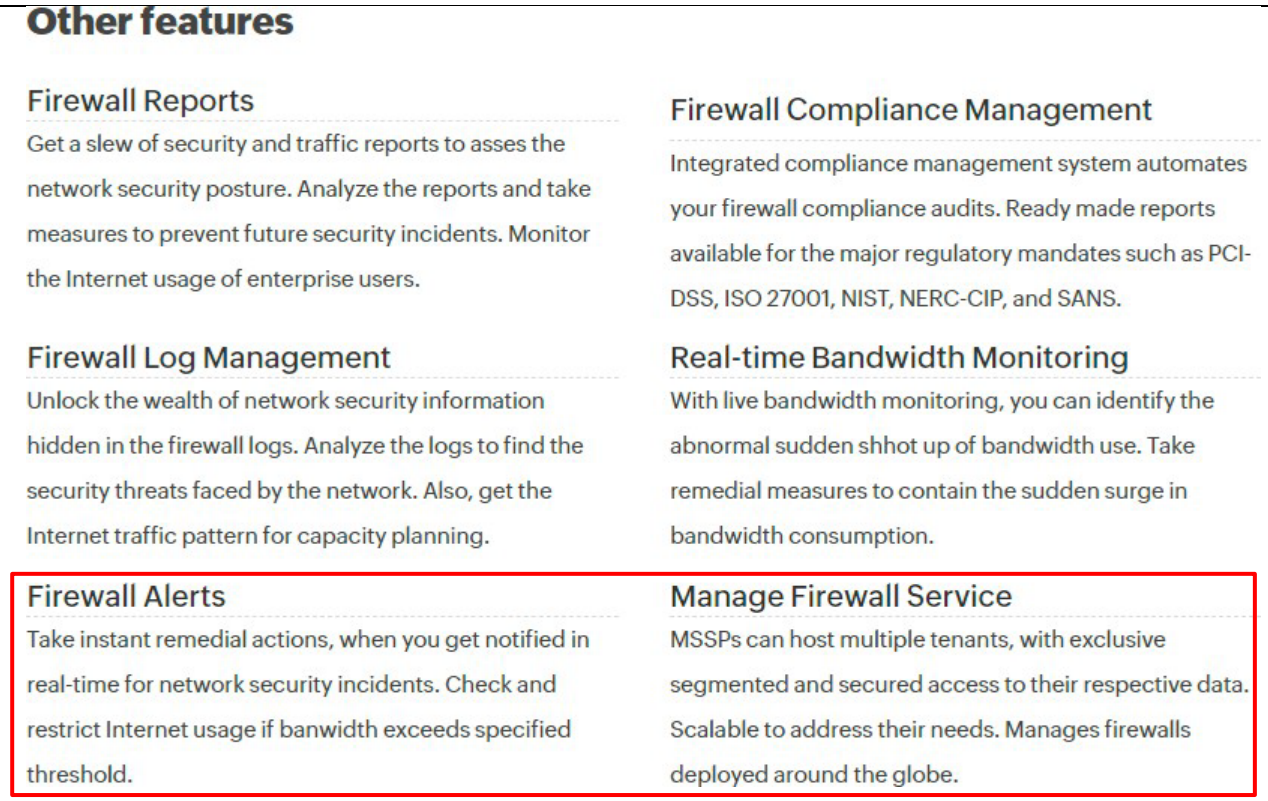

Other features

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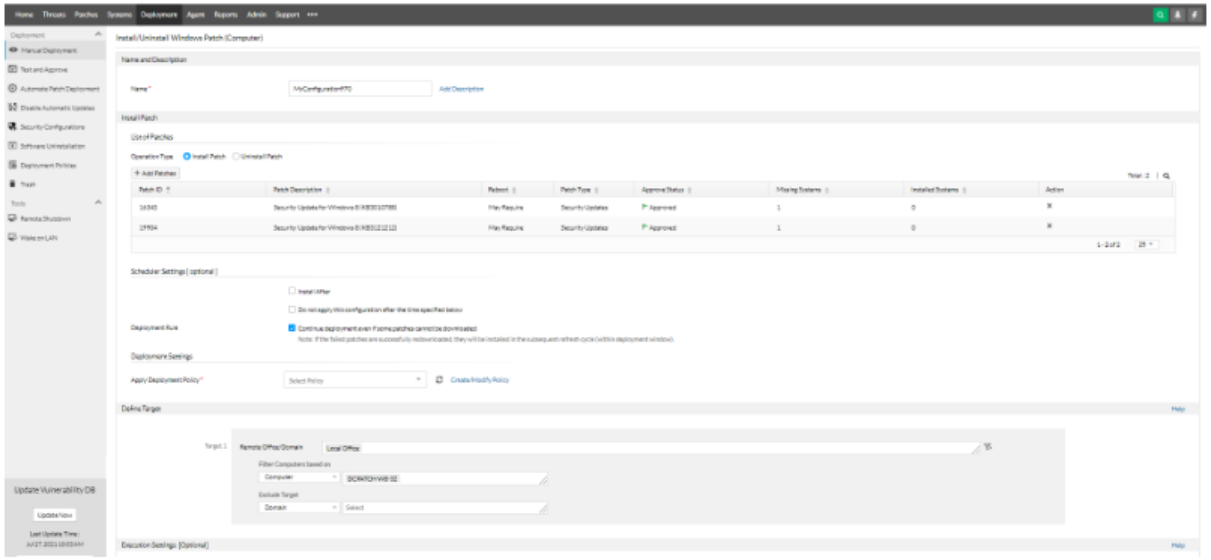
With the built-in patching functionality automatically correlating patches with corresponding vulnerabilities, you can deliver instant remediation to all affected machines directly. Not only can you decide when patching should begin and end, but you can also customize every aspect of your patching process using flexible deployment policies. Affected target systems are automatically listed; here, you can add or remove targets as desired. You can also retry patch deployments on failed targets as many times as you want and choose to be notified about the deployment status at a frequency of your choosing.



https://www.manageengine.com/vulnerability-management/vulnerability-assessment.html

EXHIBIT 12

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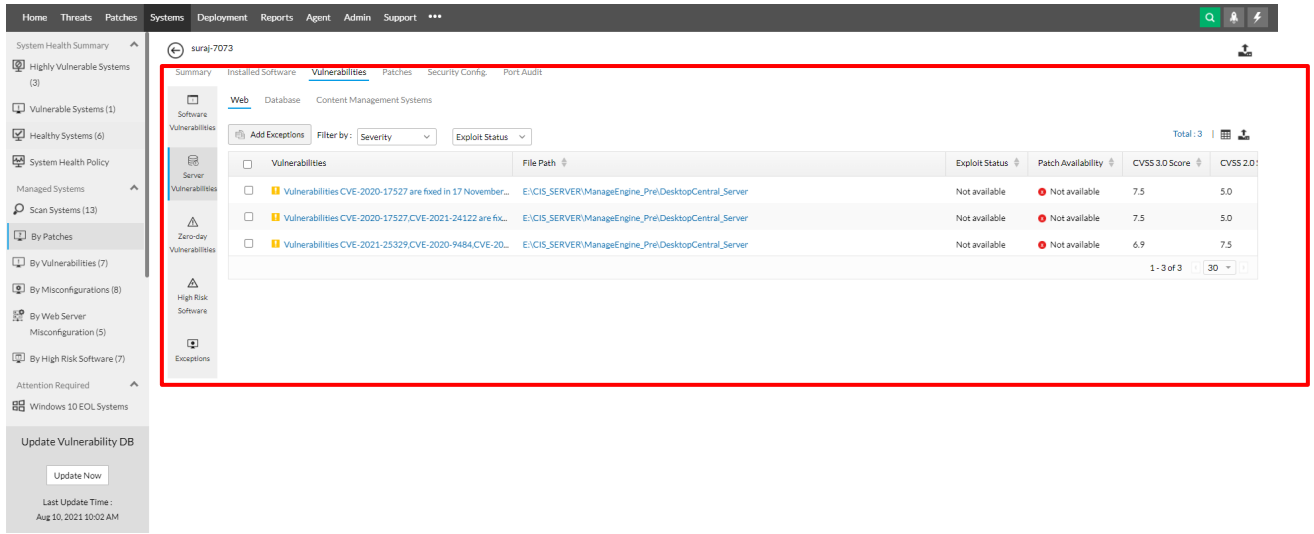

- The Software Vulnerabilities section enumerates vulnerabilities in the OS and third-party applications installed on the system.
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allows receipt of: user input causing selection of the first technique for utilizing the intrusion prevention system component for occurrence mitigation; user input causing selection of the second technique for utilizing the firewall for occurrence mitigation;	ManageEngine *allows receipt, user input causing selection of the first technique for utilizing the intrusion prevention system component for occurrence mitigation* (e.g., ManageEngine Vulnerability Manager Plus includes web consol on which user can select antivirus option)*; user input causing selection of the second technique for utilizing the firewall for occurrence mitigation* (e.g., ManageEngine Vulnerability Manager Plus includes firewall option. The ManageEngine provides flexibility to choose the devices for applying the different policies or mitigation techniques according to the requirements)*;* Note: See, for example, the evidence above (where applicable) and below (emphasis added, if any): **Intrusion detection and prevention** Our intrusion detection mechanism takes note of host-based signals on individual devices and network-based signals from monitoring points within our servers. Administrative access, use of privileged commands, and system calls on all servers in our production network are logged. Rules and machine intelligence built on top of this data give security engineers warnings of possible incidents. At the application layer, we have our proprietary WAF which operates on both whitelist and blacklist rules. At the Internet Service Providers (ISP) level, a multi-layered security approach is implemented with scrubbing, network routing, rate limiting, and filtering to handle attacks from network layer to application layer. This system provides clean traffic, reliable proxy service, and a prompt reporting of attacks, if any.

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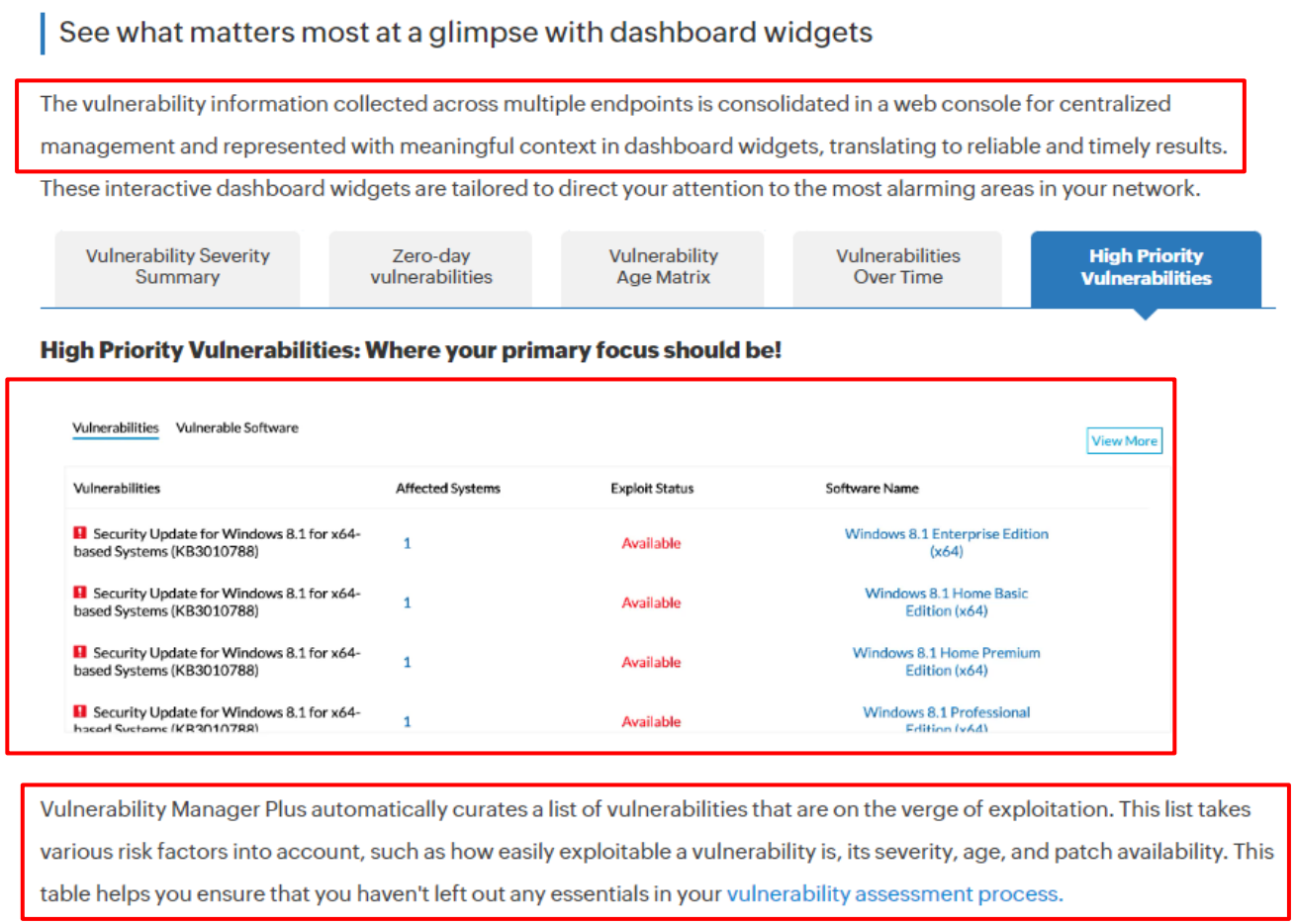

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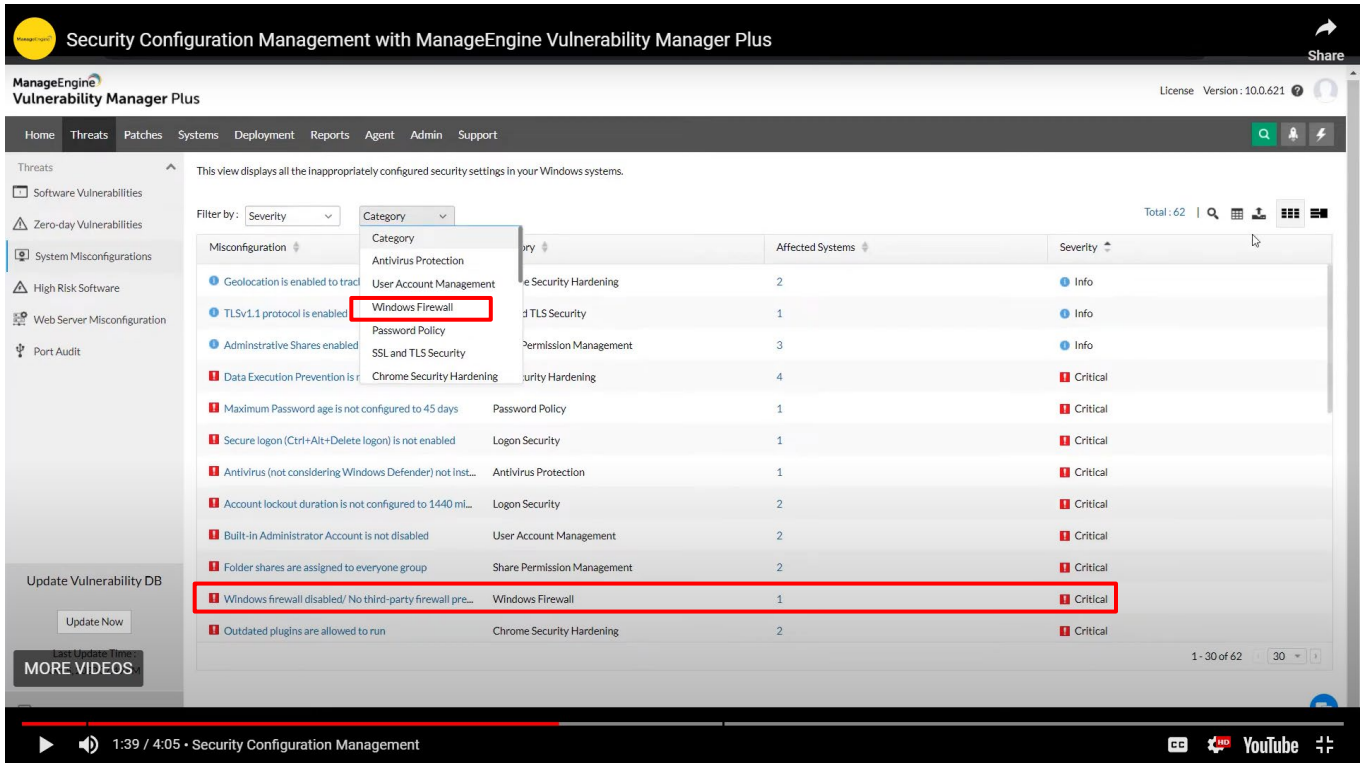

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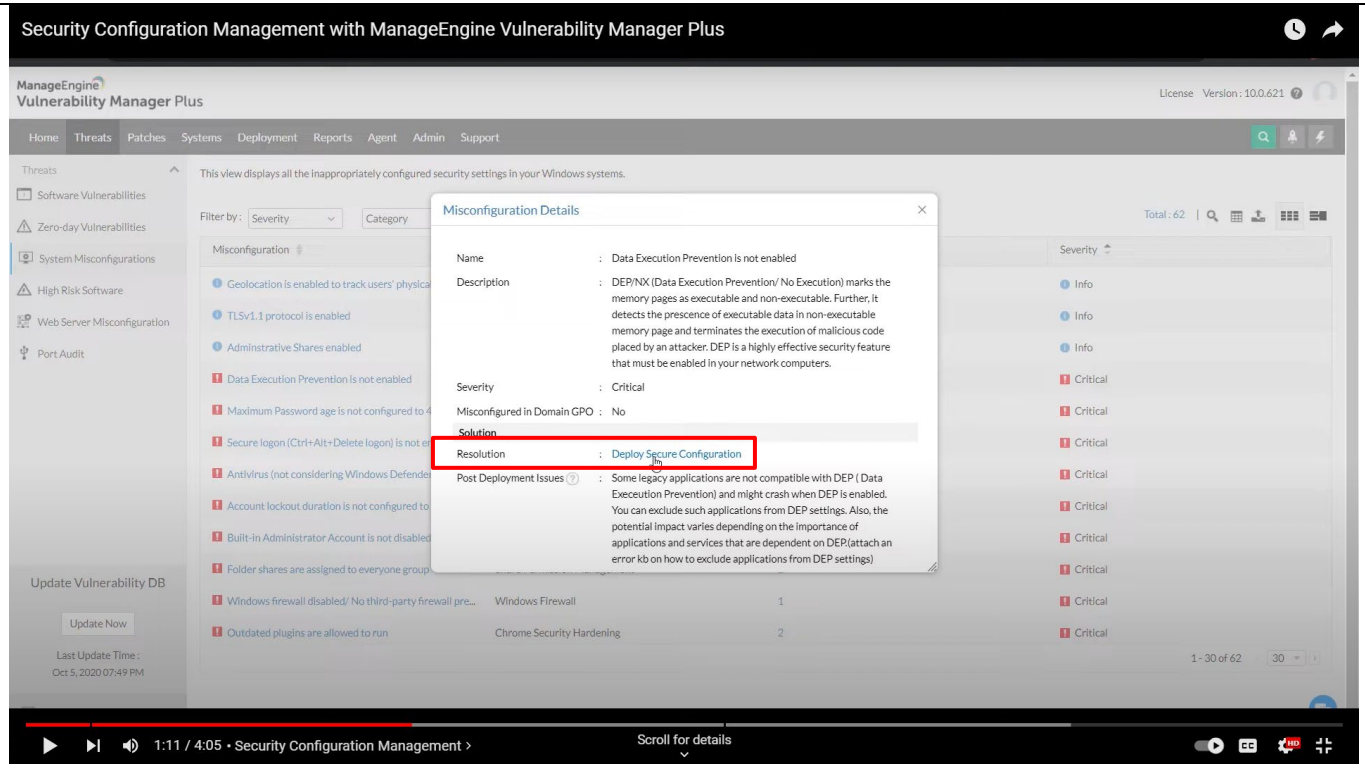

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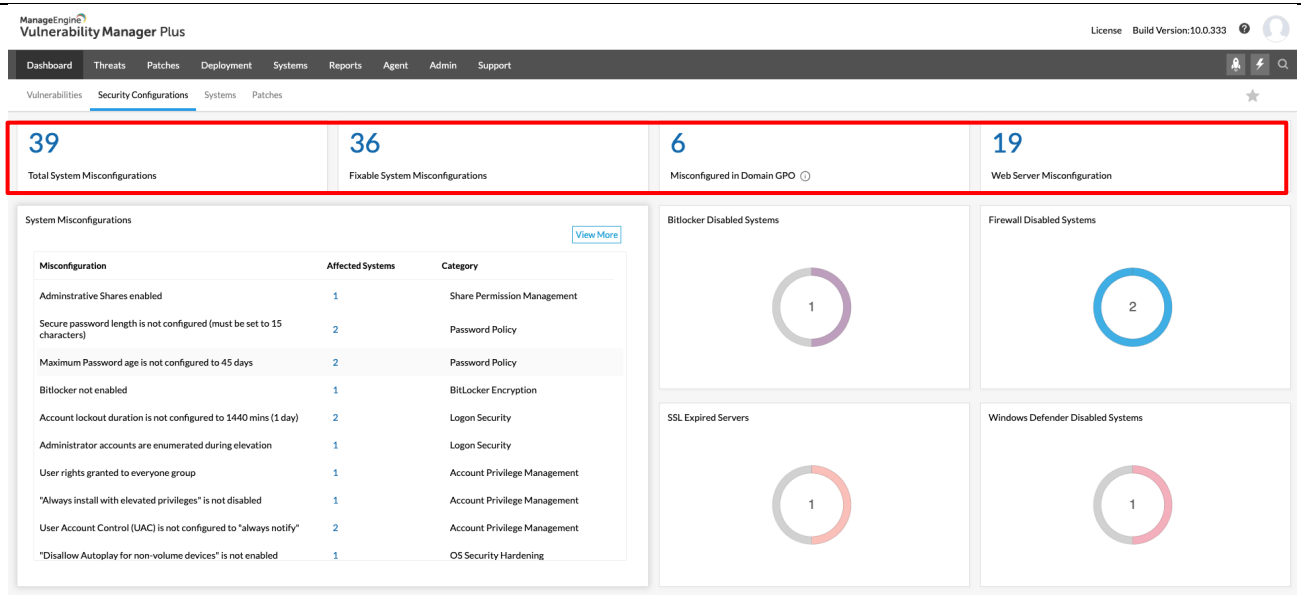

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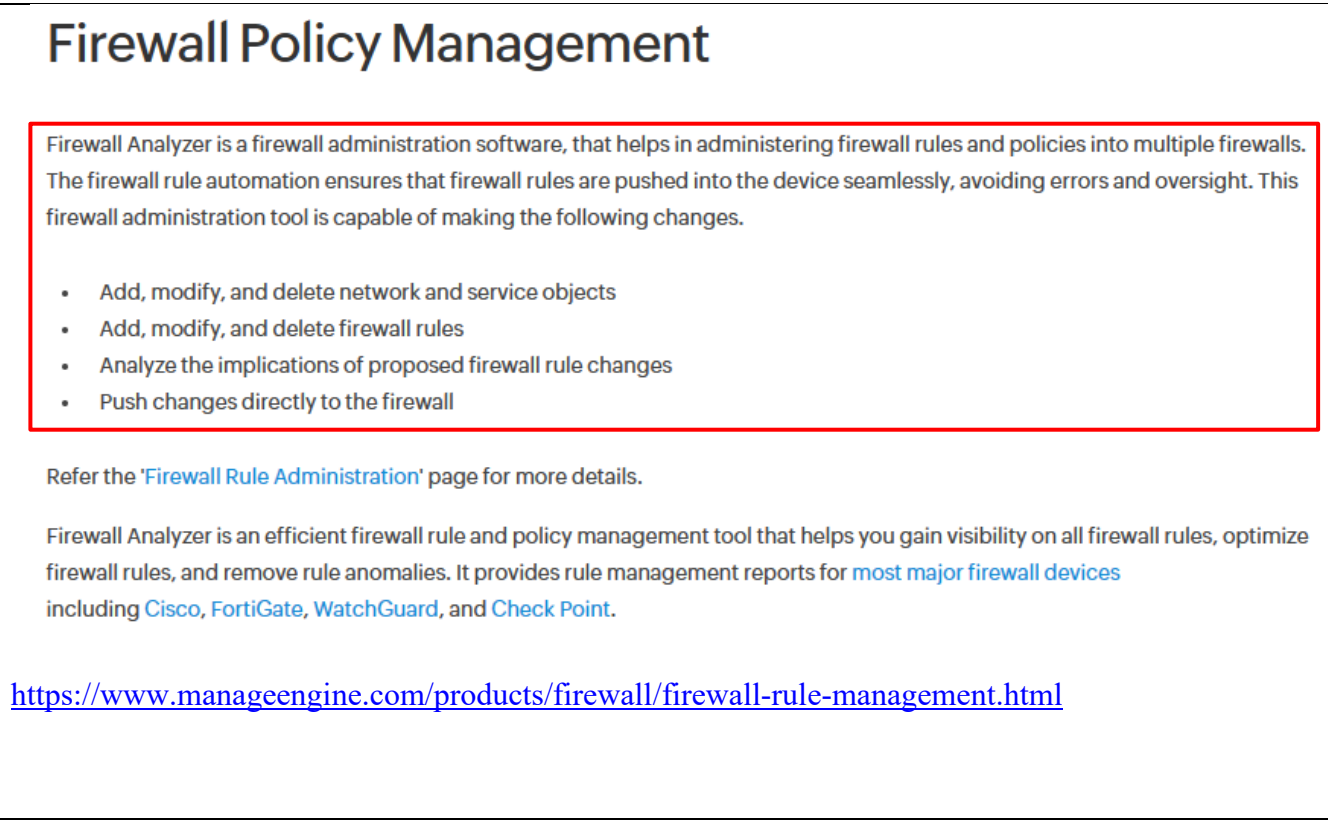

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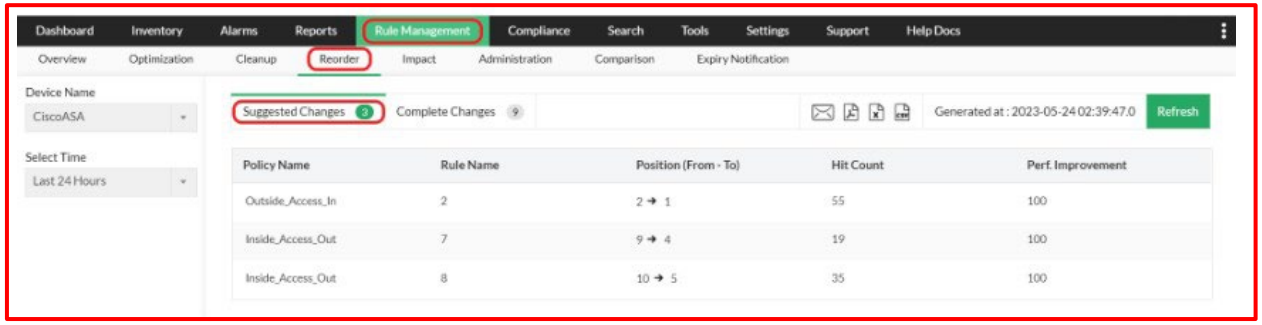
	3. Firewall Rule Reorder Recommendations  Firewall Analyzer analyzes various rule interactions and anomalies to provide suggestions on rule position. By correlating the number of rule hits with rule complexity and anomalies, it can estimate the performance improvement for a suggested change. With the help of this report, you get an understanding of how to organize firewall rules to maximize speed. https://www.manageengine.com/products/firewall/firewall-rule-management.html

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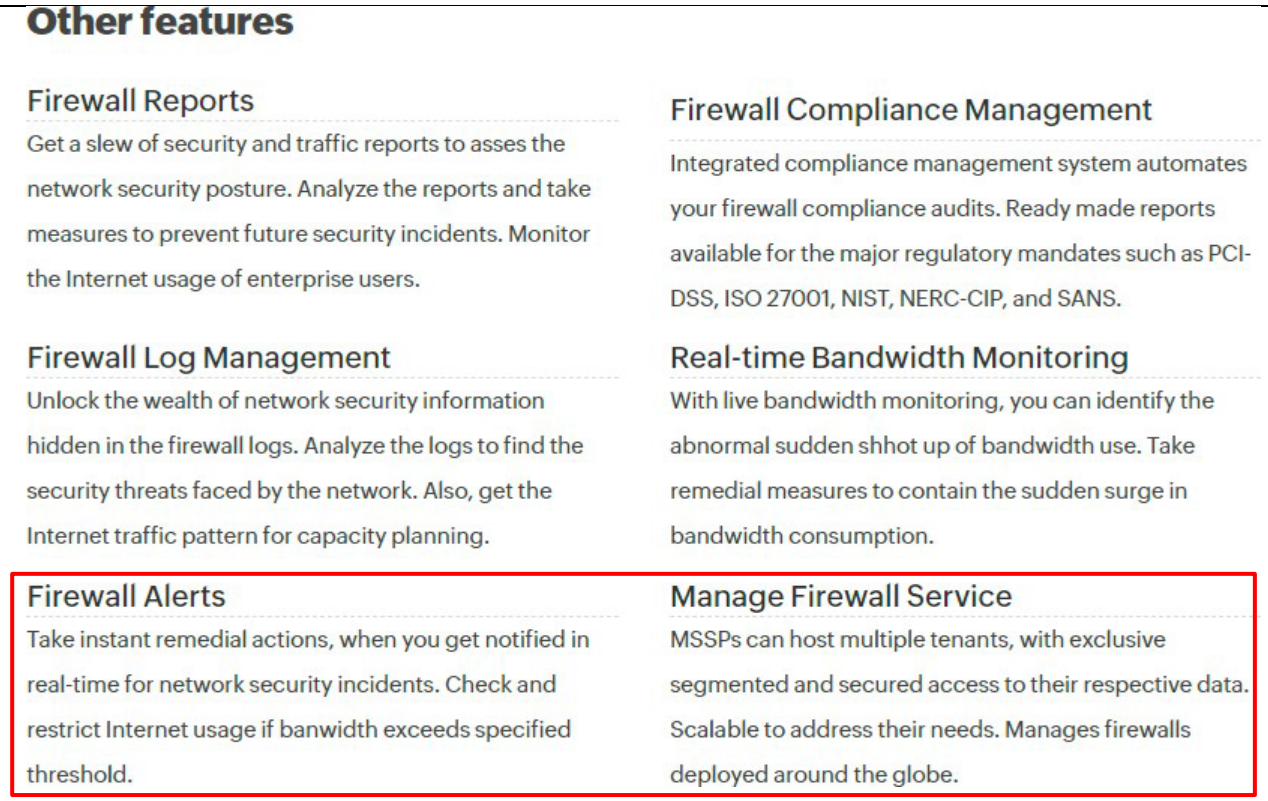

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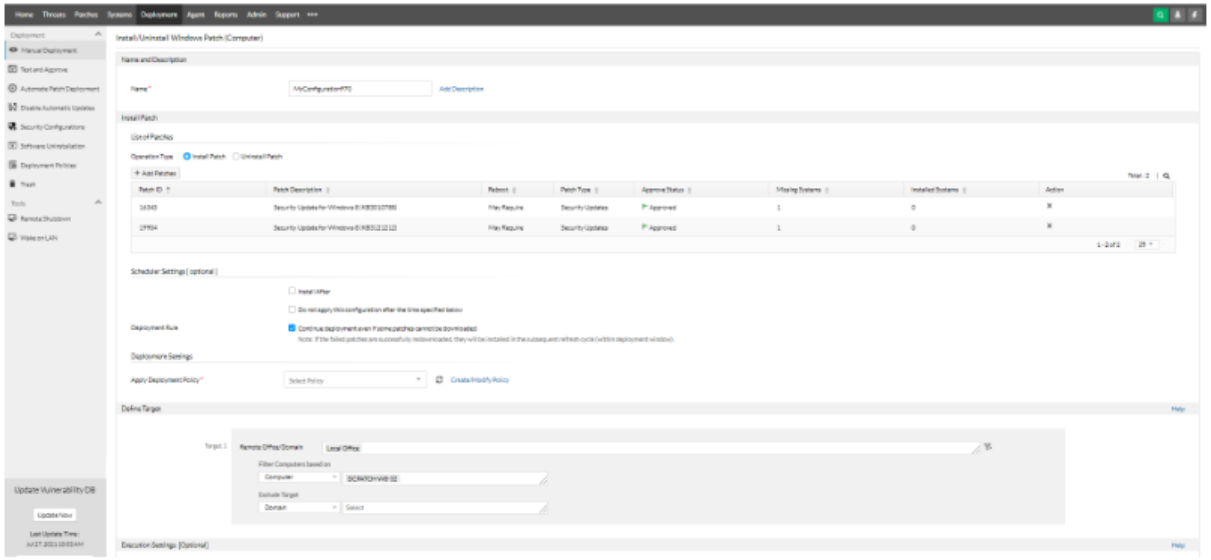

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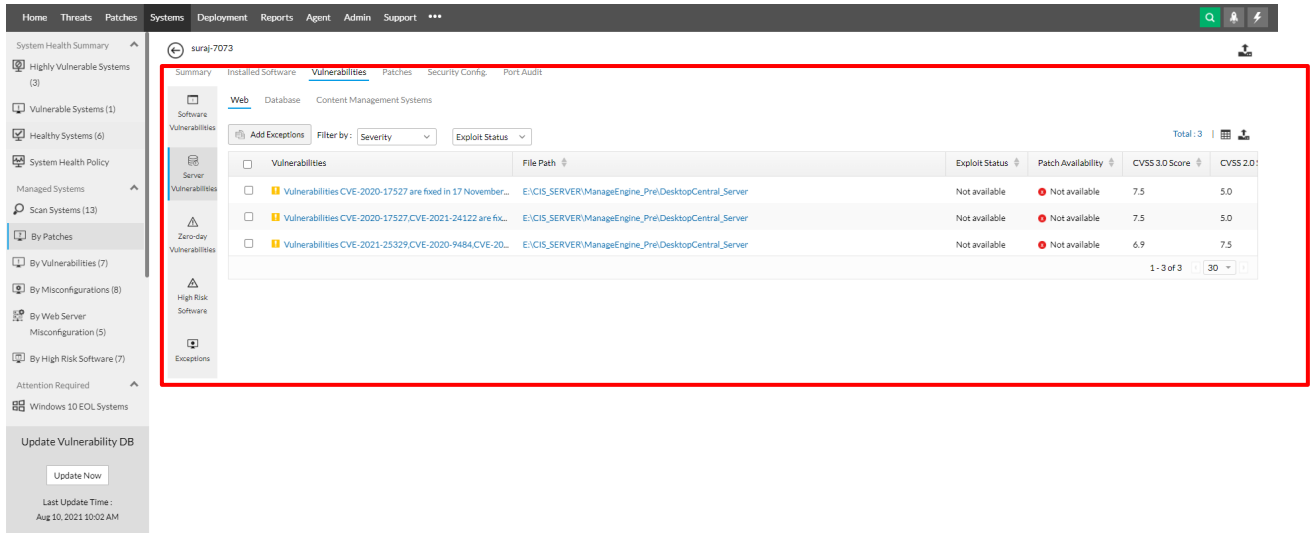

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applies, based on the user input causing selection of the first technique for utilizing the intrusion prevention system component for occurrence mitigation, the first technique for utilizing the intrusion prevention system component for occurrence mitigation; applies, based on the user input causing selection of the second technique for utilizing the firewall for occurrence mitigation, the second technique for utilizing the firewall for occurrence mitigation;	ManageEngine *applies, based on the user input causing selection of the first technique for utilizing the intrusion prevention system component for occurrence mitigation, the first technique for utilizing the intrusion prevention system component for occurrence mitigation* (e.g., ManageEngine Vulnerability Manager Plus includes web consol on which user can select antivirus option)*; applies, based on the user input causing selection of the second technique for utilizing the firewall for occurrence mitigation, the second technique for utilizing the firewall for occurrence mitigation* (e.g., ManageEngine Vulnerability Manager Plus includes firewall option. The ManageEngine provides flexibility to choose the devices for applying the different policies or mitigation techniques according to the requirements)*;* Note: See, for example, the evidence above (where applicable) and below (emphasis added, if any):

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	Intrusion detection and prevention Our intrusion detection mechanism takes note of host-based signals on individual devices and network-based signals from monitoring points within our servers. Administrative access, use of privileged commands, and system calls on all servers in our production network are logged. Rules and machine intelligence built on top of this data give security engineers warnings of possible incidents. At the application layer, we have our proprietary WAF which operates on both whitelist and blacklist rules. At the Internet Service Providers (ISP) level, a multi-layered security approach is implemented with scrubbing, network routing, rate limiting, and filtering to handle attacks from network layer to application layer. This system provides clean traffic, reliable proxy service, and a prompt reporting of attacks, if any. https://www.manageengine.com/security.html?mesearch

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https://www.manageengine.com/vulnerability-management/vulnerability-assessment.html

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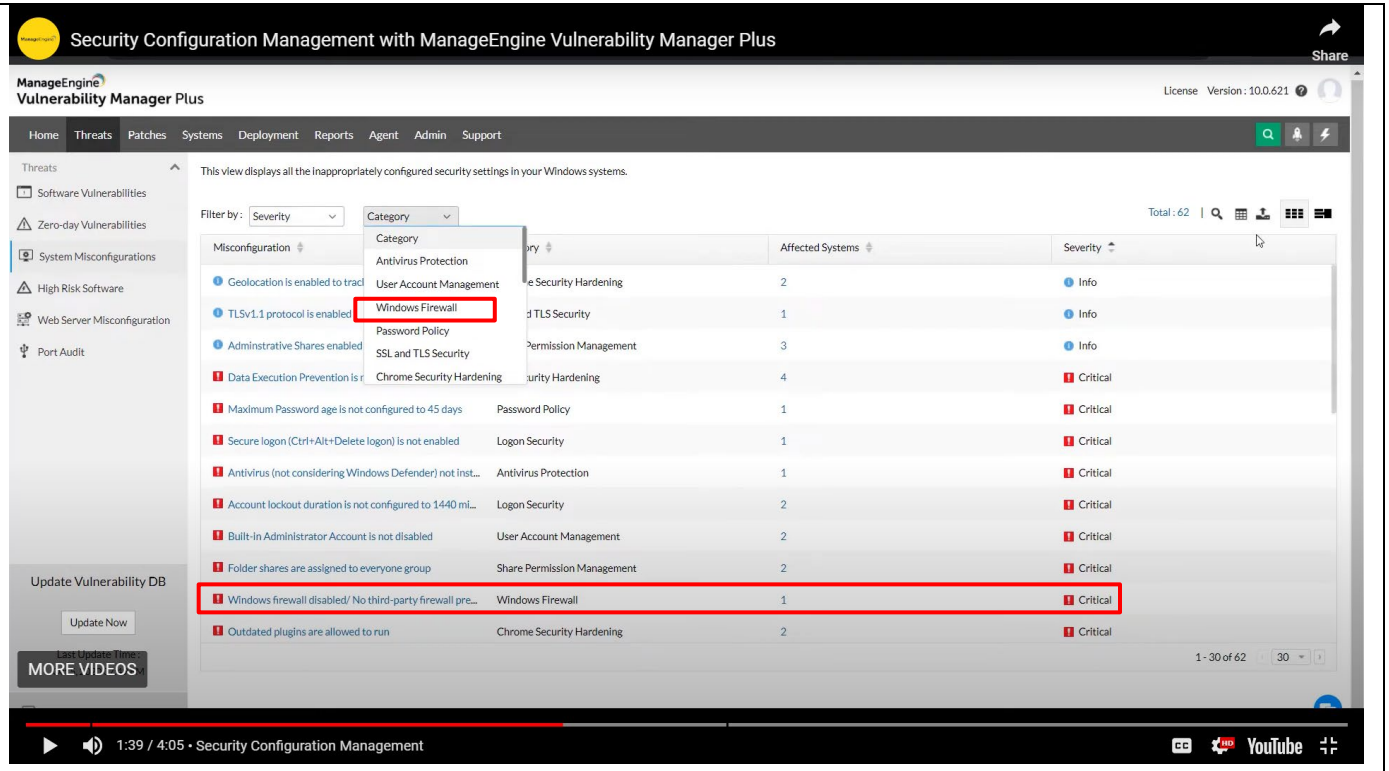

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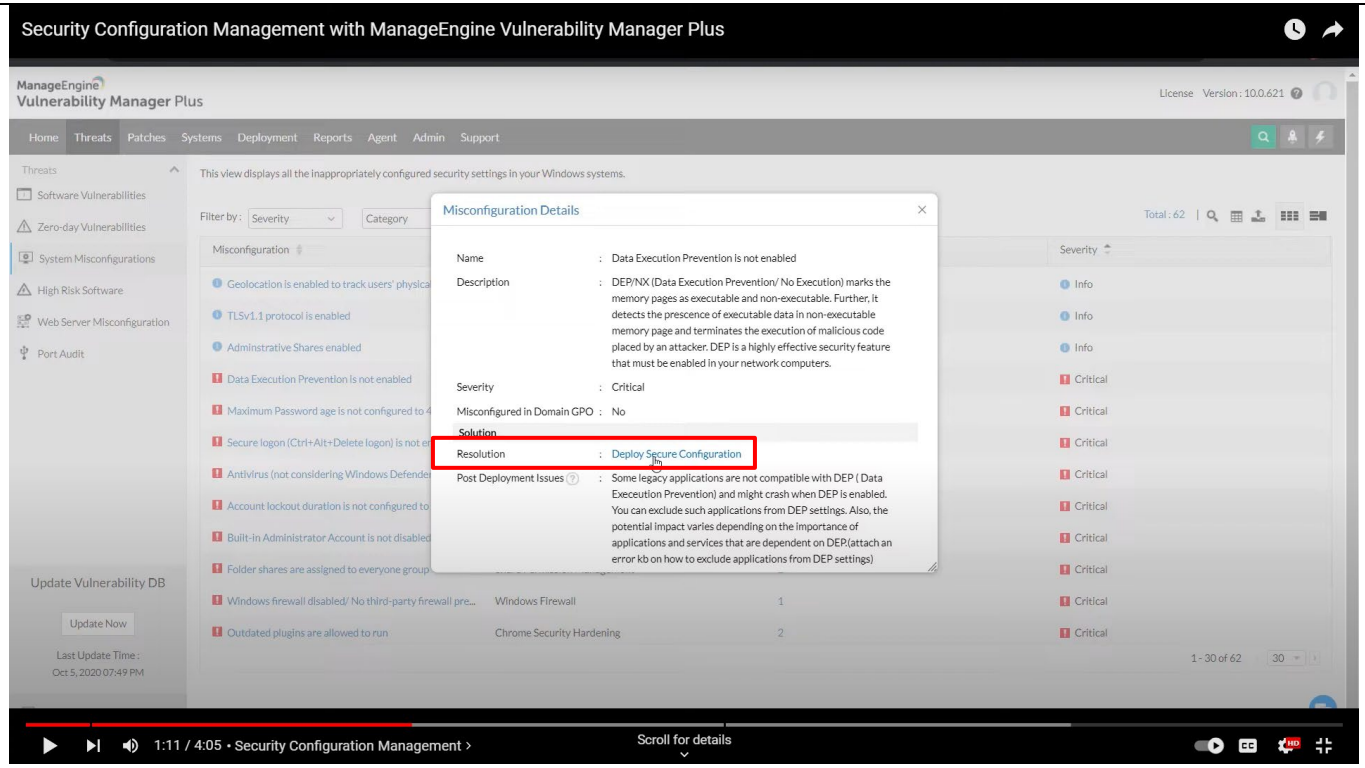

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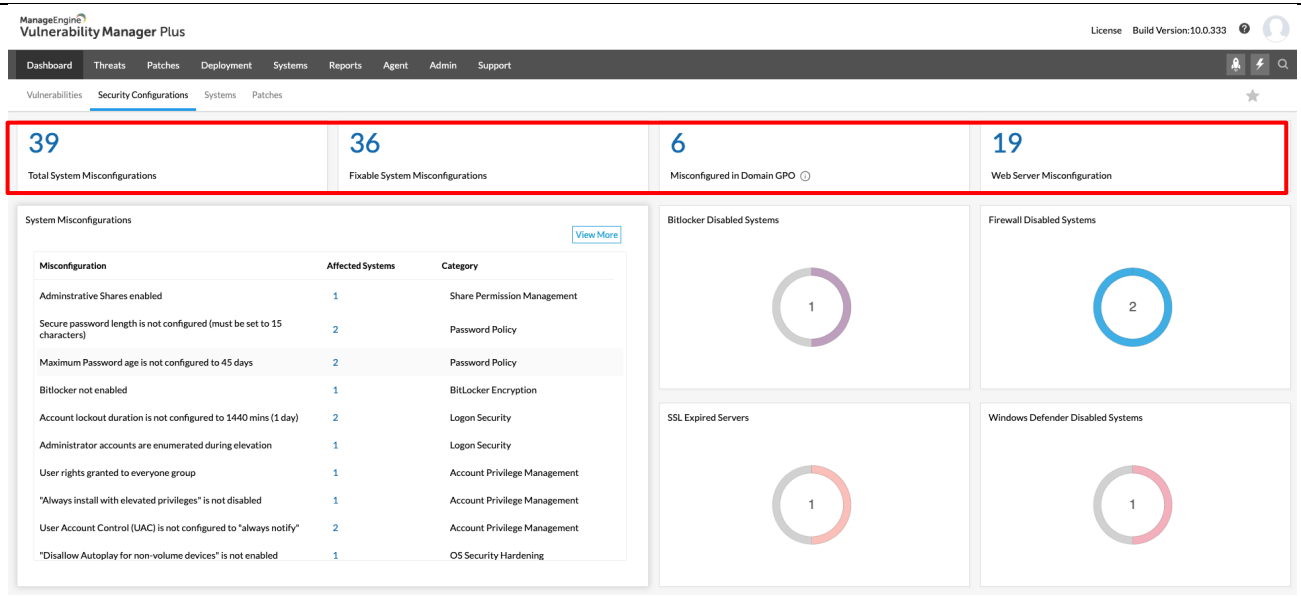

https://www.manageengine.com/vulnerability-management/what-is-vulnerability-management.html

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Firewall Policy Management

Firewall Analyzer is a firewall administration software, that helps in administering firewall rules and policies into multiple firewalls. The firewall rule automation ensures that firewall rules are pushed into the device seamlessly, avoiding errors and oversight. This firewall administration tool is capable of making the following changes.

- Add, modify, and delete network and service objects
- Add, modify, and delete firewall rules
- Analyze the implications of proposed firewall rule changes
- Push changes directly to the firewall

Refer the 'Firewall Rule Administration' page for more details.

Firewall Analyzer is an efficient firewall rule and policy management tool that helps you gain visibility on all firewall rules, optimize firewall rules, and remove rule anomalies. It provides rule management reports for most major firewall devices including Cisco, FortiGate, WatchGuard, and Check Point.

https://www.manageengine.com/products/firewall/firewall-rule-management.html

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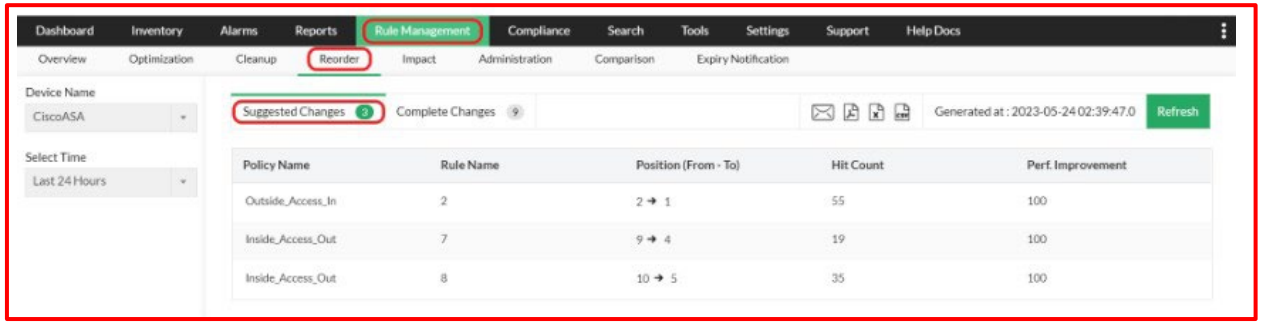
	3. Firewall Rule Reorder Recommendations  Firewall Analyzer analyzes various rule interactions and anomalies to provide suggestions on rule position. By correlating the number of rule hits with rule complexity and anomalies, it can estimate the performance improvement for a suggested change. With the help of this report, you get an understanding of how to organize firewall rules to maximize speed. https://www.manageengine.com/products/firewall/firewall-rule-management.html

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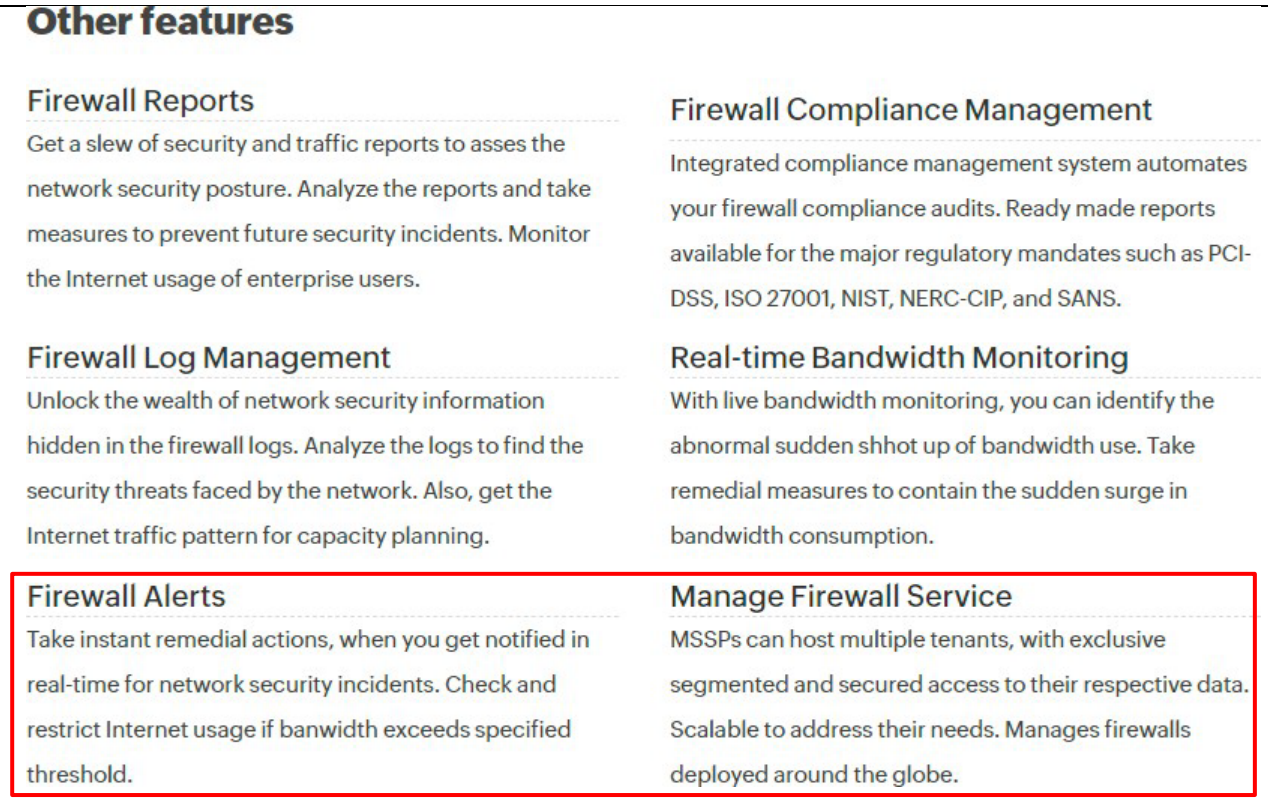

Other features

Firewall Reports

Get a slew of security and traffic reports to asses the network security posture. Analyze the reports and take measures to prevent future security incidents. Monitor the Internet usage of enterprise users.

Firewall Compliance Management

Integrated compliance management system automates your firewall compliance audits. Ready made reports available for the major regulatory mandates such as PCI-DSS, ISO 27001, NIST, NERC-CIP, and SANS.

Firewall Log Management

Unlock the wealth of network security information hidden in the firewall logs. Analyze the logs to find the security threats faced by the network. Also, get the Internet traffic pattern for capacity planning.

Real-time Bandwidth Monitoring

With live bandwidth monitoring, you can identify the abnormal sudden shhot up of bandwidth use. Take remedial measures to contain the sudden surge in bandwidth consumption.

Firewall Alerts

Take instant remedial actions, when you get notified in real-time for network security incidents. Check and restrict Internet usage if banwidth exceeds specified threshold.

Manage Firewall Service

MSSPs can host multiple tenants, with exclusive segmented and secured access to their respective data. Scalable to address their needs. Manages firewalls deployed around the globe.

https://www.manageengine.com/products/firewall/firewall-rule-management.html

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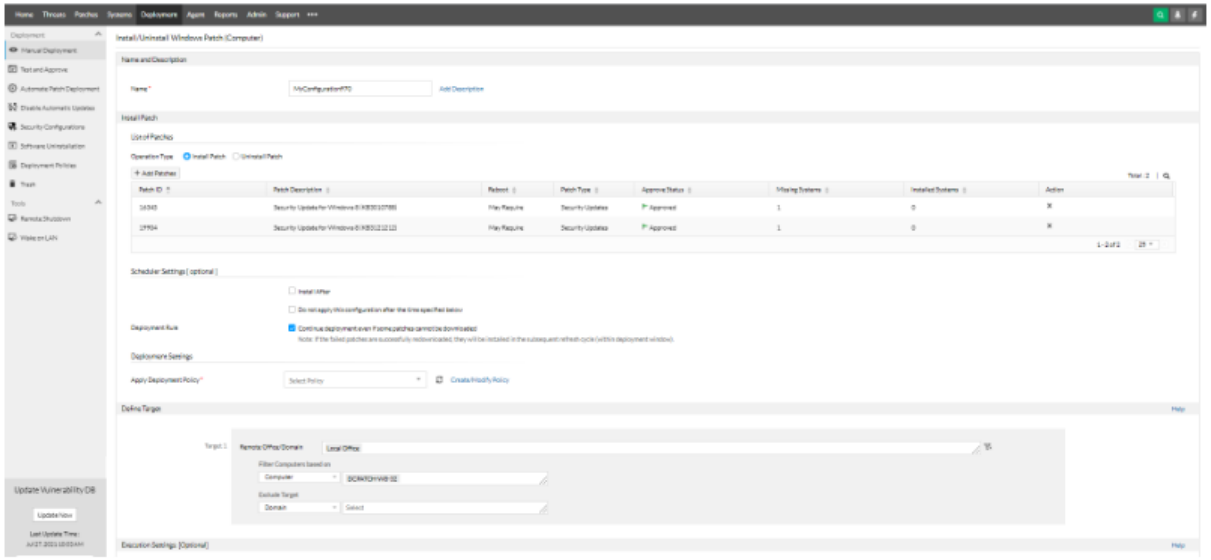
Leverage built-in patching to ensure swift and accurate remediation

With the built-in patching functionality automatically correlating patches with corresponding vulnerabilities, you can deliver instant remediation to all affected machines directly. Not only can you decide when patching should begin and end, but you can also customize every aspect of your patching process using flexible deployment policies. Affected target systems are automatically listed; here, you can add or remove targets as desired. You can also retry patch deployments on failed targets as many times as you want and choose to be notified about the deployment status at a frequency of your choosing.



https://www.manageengine.com/vulnerability-management/vulnerability-assessment.html

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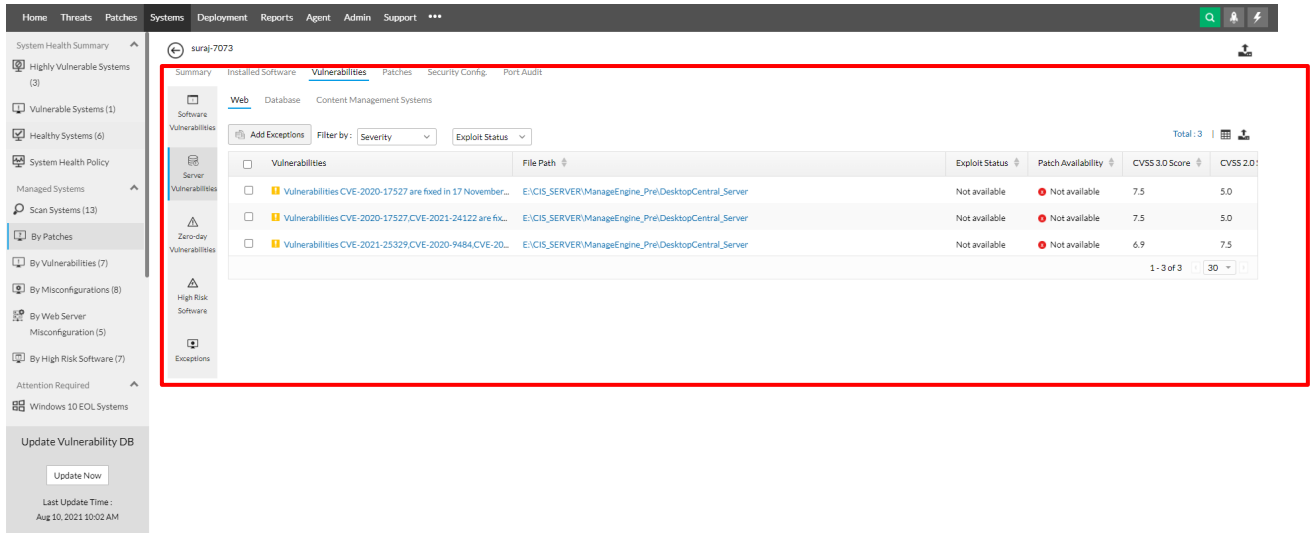
> How can I access drilled-down information on vulnerabilities in individual systems?

Clicking on a system takes you to a drilled-down view that clusters vulnerabilities of the system into three major categories:



- The Software Vulnerabilities section enumerates vulnerabilities in the OS and third-party applications installed on the system.
- The Server Vulnerabilities section displays vulnerabilities in web servers, databases, or content management software installed on the system, if any.
- The Zero-day Vulnerabilities section displays the actively exploited and publicly disclosed vulnerabilities affecting the system.

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identifies: for the at least one networked device, a first occurrence including at least one first occurrence packet, and for the at least one networked device; a second occurrence including at least one second occurrence packet;	ManageEngine *identifies, for the at least one networked device, a first occurrence including at least one first occurrence packet* (e.g., Bad traffic)*, and for the at least one networked device; a second occurrence including at least one second occurrence packet* (e.g., good traffic)*;* Note: See, for example, the evidence above (where applicable) and below (emphasis added, if any): How to prevent security misconfigurations? If vulnerabilities are the gateway to the network, it's the misconfigurations that attackers leverage to worm their way to the intended targets. Security misconfigurations are not hard to fix, but they are unavoidable in an enterprise operating at scale. Finding them is a needle in the haystack, as they can be located across any component in an organization's systems, such as its servers, operating systems, applications, and browsers. Lack of visibility and centralized means to remediate misconfigurations makes organizations fall victim to misconfiguration attacks. https://www.manageengine.com/vulnerability-management/misconfiguration/?mesearch

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As soon as it's up and running in your network, Vulnerability Manager Plus automatically discovers your Active Directory and workgroup assets. Scaling up? No problem. Since Vulnerability Manager Plus is constantly in sync with Active Directory, new assets will be brought under management as soon as they enter your network, leaving no opportunity for new threats to go unnoticed.

Leveraging endpoint agent technology, Vulnerability Manager Plus scans your laptops, desktops, servers, databases, workstations, and virtual machines across your entire global hybrid IT environment every 90 minutes, irrespective of whether they're within the corporate boundary or not.

You can set up distribution servers, which replicate primary server commands, for your remote offices simplify management and conserve bandwidth. You can even manage assets within a closed network like a DMZ.

Identified systems are probed for different attributes: operating systems, open ports, installed software, user accounts, file system structure, system configurations, and more. Using the library of up-to-date scan data, Vulnerability Manager Plus checks the discovered assets for threats and vulnerabilities and delivers appropriate remediation.

https://www.manageengine.com/vulnerability-management/what-is-vulnerability-management.html

DDoS prevention

We use technologies from well-established and trustworthy service providers to prevent DDoS attacks on our servers. These technologies offer multiple DDoS mitigation capabilities to prevent disruptions caused by bad traffic, while allowing good traffic through. This keeps our websites, applications, and APIs highly available and performing.

https://www.manageengine.com/security.html?mesearch

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determines: that the first occurrence including the at least one first occurrence packet directed to the at least one networked	ManageEngine *determines, that the first occurrence including the at least one first occurrence packet directed to the at least one networked device is capable of taking advantage of the at least one of the actual vulnerability to which the at least one networked device is actually vulnerable* (e.g., Bad traffic)*; that the second occurrence including the at least one second occurrence packet directed to the at least one*

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device is capable of taking advantage of the at least one of the actual vulnerability to which the at least one networked device is actually vulnerable; that the second occurrence including the at least one second occurrence packet directed to the at least one networked device is not capable of taking advantage of the at least one of the actual vulnerability to which the at least one networked device is actually vulnerable, and	*networked device is not capable of taking advantage of the at least one of the actual vulnerability to which the at least one networked device is actually vulnerable* (e.g., good traffic), *and;* Note: See, for example, the evidence above (where applicable) and below (emphasis added, if any): How to prevent security misconfigurations? If vulnerabilities are the gateway to the network, it's the misconfigurations that attackers leverage to worm their way to the intended targets. Security misconfigurations are not hard to fix, but they are unavoidable in an enterprise operating at scale. Finding them is a needle in the haystack, as they can be located across any component in an organization's systems, such as its servers, operating systems, applications, and browsers. Lack of visibility and centralized means to remediate misconfigurations makes organizations fall victim to misconfiguration attacks. https://www.manageengine.com/vulnerability-management/misconfiguration/?mesearch

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You can set up distribution servers, which replicate primary server commands, for your remote offices simplify management and conserve bandwidth. You can even manage assets within a closed network like a DMZ.

Identified systems are probed for different attributes: operating systems, open ports, installed software, user accounts, file system structure, system configurations, and more. Using the library of up-to-date scan data, Vulnerability Manager Plus checks the discovered assets for threats and vulnerabilities and delivers appropriate remediation.

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causes a reporting of at least the first occurrence based on the determination that the first occurrence including the at least one first occurrence	ManageEngine *causes a reporting of at least the first occurrence based on the determination that the first occurrence including the at least one first occurrence packet is capable of taking advantage of the at least one of the actual vulnerability to which the at least one networked device is actually vulnerable* (e.g., mitigation capabilities to prevent disruptions caused by bad traffic).

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